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City of
Encinitas

December 29, 1987

Attached please find a copy/copies of final technical background report(s) for the following element(s) of the City of Encinitas General Plan:

- ☒ Resources Management
- ☒ Public Safety
- ☒ Housing
- ☒ Noise
- ☒ Recreation

> Land Use

These reports are not complete elements, but background reports providing "current status" information about the City. The final elements, which are now in production, will include goals and policies and provide direction on ways the goals and policies may be implemented. Draft elements are presently scheduled for public review beginning in March of 1988.

These technical reports are provided to you at this time for your information. In your review, any inaccuracies or omissions may be noted and forwarded back to the City's Community Development Department, attention Craig Jones, Senior Planner. There is no particular deadline for your comments, but we would appreciate knowing about any significant errors as soon as possible. If you have any questions about these reports or the City's General Plan program, please contact the Department at 944-5060.

DSB for

Patrick Morphy
Director of Community Development

PROGRESS REPORT



Issue No. 6

January 1988

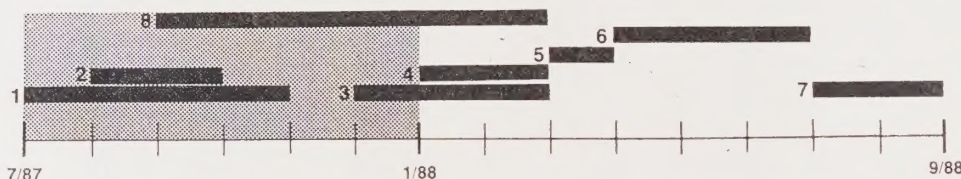
Land Use Studied, Production of Plan Elements Begins.

During the month of December review and revision of the preliminary land use alternative maps was completed. This included review by the General Plan Ad Hoc Committee, and joint workshops of the City Council and Planning Commission. During this process the Ad Hoc committee and the city's consultants also gave initial consideration to individual property owner and developer requests for parcel designation changes. As a result of this consideration, some of the requests have been incorporated into one of the three preliminary land use alternatives.

At the joint Planning Commission/City Council workshop on Dec. 3 participants reviewed the land use alternatives to date, and recommended adjustments. At this session the City's sub-consultant for redevelopment, Frank Spevacek of the Rosenow/Spevacek Group, also presented an introduction to that portion of the general plan work program. Rosenow/Spevacek Group will produce a feasibility study of areas of the City which may be suitable for economic revitalization and redevelopment. This study should be completed by the end of February, and will be reviewed at that time.

The City's main general plan consultants, the firm of Cotton/Beland/Associates, began production of screen drafts of the seven general plan elements in December. These should be available for staff and Ad Hoc Committee review through January. The plan elements will build on the background information provided in the technical reports, and will include revised goals and policies, projections of future circumstances, and outlines of implementing strategies and programs to achieve the plan's goals and policies.

PROGRESS TIMELINE



FOR MORE INFORMATION

Copies of work done to date on the General Plan are available at City Hall and at the Encinitas and Cardiff branch libraries. To get your own copies of this month's Progress Report, send your request and 12 self-addressed envelopes to:

Craig Jones
c/o City of Encinitas Community Development Department
527 Encinitas Blvd.
Encinitas, CA 92024
Or call for more information at 944-5060.

MILESTONES

At right are the major elements of the General Plan/LCP work program, and rough time schedules for their performance. Please relate to the time-line above. These time schedules are subject to refinement and change, as may be necessary, as the work program proceeds.

1. Background Technical Studies — July-November, 1987.
2. Preliminary Goals Identification — August-October, 1987.
3. General Plan Draft — December, 1987-February, 1988.
4. Draft Zoning and Development Regulations — January-February, 1988.
5. Environmental Impact Report — March, 1988.
6. General Plan/Zoning/EIR Public Hearings — April-July, 1988.
7. Local Coastal Program — August-September, 1988.
8. Revitalization Study — September 1987-February 1988.

Upcoming for

JANUARY: Traffic System Analysis Of Land Use/Circulation Alternatives Draft General Plan Elements Due

January will be an important month for the General Plan program. The program will focus on review of circulation/traffic system analyses at the General Plan Ad Hoc Committee

and at joint Planning Commission/City Council workshops. City Staff and the General Plan Ad Hoc Committee will also begin review of the preliminary draft general plan elements.

February Open House Scheduled

A special public "open house" has been scheduled to provide the community with an opportunity to review land use maps and alternatives, technical reports, and the draft general plan elements. The

all day open house for review of general plan progress will be held on Saturday February 6, 1988 from 10 a.m.-4 p.m. at the City Council Chambers, 535 Encinitas Blvd.

Schedule of Public Meetings

January

- * General Plan Ad-Hoc Committee
NDS Conference Room, 539 Encinitas Blvd.
Tues., Jan. 5, 7:30 p.m. Thurs., Jan. 14, 7:30 p.m.
Thurs., Jan. 7, 7:30 p.m. Thurs., Jan. 21, 7:30 p.m.
- * Joint Planning Commission/City Council Workshop
City Council Chambers, 527 Encinitas Blvd.
Thurs., Jan. 28, 7:00 p.m.

February

- * Public Open House
City Council Chambers, 535 Encinitas Blvd.
Sat., Feb. 6, 10 a.m.-4 p.m.

PROGRESS REPORT

Submitted to the Board of Directors of the American Chemical Society

The following report covers the progress of the work of the American Chemical Society during the year 1954. The work of the Society has been carried on in accordance with the plan of work approved by the Board of Directors at its meeting in 1953. The work of the Society has been carried on in accordance with the plan of work approved by the Board of Directors at its meeting in 1953. The work of the Society has been carried on in accordance with the plan of work approved by the Board of Directors at its meeting in 1953.

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HOUSING ELEMENT TECHNICAL REPORT

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Encinitas
General Plan



HOUSING ELEMENT TECHNICAL REPORT
CITY OF ENCINITAS GENERAL PLAN

December 1987

Prepared by:

Cotton/Beland/Associates
619 South Vulcan Avenue, Suite 205
Encinitas, California 92024



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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	HTR-1
Purpose of Report	HTR-1
Sources of Information	HTR-2
POPULATION CHARACTERISTICS	HTR-5
Population Growth	HTR-5
Population Characteristics of the Community	HTR-7
SOCIO-ECONOMIC CHARACTERISTICS	HTR-10
Household Characteristics	HTR-10
Household Size	HTR-10
Overcrowding	HTR-11
Household Income	HTR-12
Housing Costs	HTR-15
Special Needs Groups	HTR-17
HOUSING UNIT CHARACTERISTICS	HTR-18
Trends in Housing	HTR-18
Tenure	HTR-20
Condition of Housing	HTR-20
Homeless in the City	HTR-24
EMPLOYMENT CHARACTERISTICS	HTR-26
Resident Population	HTR-26

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 Regional Population Growth	HTR-5
2 Population Trends: Encinitas and Surrounding Areas 1980-1986	HTR-6
3 Community Population Trends: 1980-86	HTR-7
4 Overcrowding in the City: 1980	HTR-11
5 Income Limits for Families of Varying Size: 1987	HTR-13
6 Household Income Characteristics: 1980	HTR-14
7 Poverty Status by Household Type: 1980	HTR-14
8 Household Expenditures and a Percentage of Income-1979	HTR-16
9 Encinitas Housing Costs: 1986-1987	HTR-17
10 Households with Special Trends: 1980	HTR-17
11 Housing Trends: 1980-87	HTR-18
12 Characteristics of Housing Units by Community	HTR-19
13 Age of Housing Stock	HTR-21
14 Housing Conditions - 1980	HTR-21
15 Homeless Shelters Serving San Diego County	HTR-25
16 Occupantions of Encinitas Residents by Census Tracts - 1979	HTR-26

LIST OF FIGURES

<u>Figure</u>	
1 Census Tract Boundaries	HTR-3
2 Community Population Trends	HTR-9
3 Housing Trends 1980-1987	HTR-19
4 Age of Housing	HTR-22

Purpose of Report

INTRODUCTION

This Technical Report provides an overview of the population, socio-economic, and housing characteristics of the City of Encinitas and the five individual communities that comprise the City. Much of the information included in this section is important in formulating housing goals, policies, and programs. This report also contains valuable demographics and socio-economic information that will be needed by staff, decision-makers, and the public.

The City of Encinitas has experienced significant growth in recent years and this growth is reflected in the number of new housing units located inland from the coast. A number of major issues have emerged in recent years regarding growth in general and the nature of new residential development in particular.

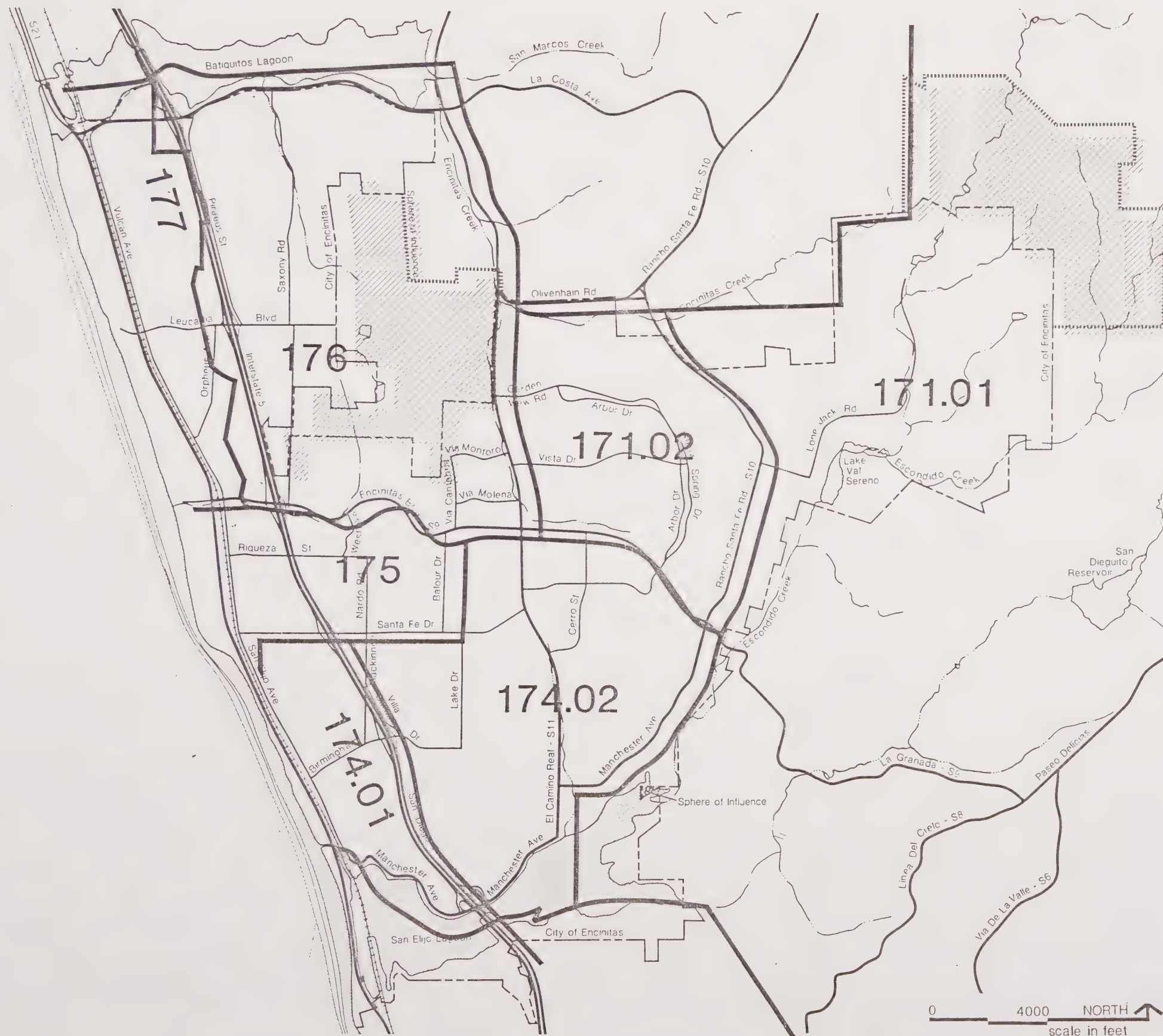
- ° The individual communities that comprise the City are growing at different rates. Cardiff-by-the-Sea has experienced modest population growth in recent years compared to New Encinitas and Olivenhain, which have nearly doubled in population in the past ten years.
- ° In recent years, much of the infill development has involved either multiple-family development, and in the case of Cardiff-by-the-Sea, the construction of large "twin homes." In parts of New Encinitas, Cardiff-by-the-Sea, and Leucadia there is wide variation in the residential densities which will make it difficult to apply land use and zoning designations to these areas.
- ° The average household size of the housing units in the City has been increasing over the past twenty years. This increase in household size is indicative of more families with smaller children moving into the City. A continuation of these trends will affect a number of public services, primarily schools and recreation.
- ° Housing affordability will continue to be a major problem in the City. Younger families entering the housing market and the elderly on fixed incomes will find it increasingly difficult to purchase housing in the City in coming years.

- ° The number of multiple-family units has increased in recent years though the City's character remains predominantly single-family.
- ° Public attitudes appear to support the maintenance of the lower density, single-family character of the City.
- ° Overall, the condition of the housing stock within the City is very good. There are isolated pockets in Leucadia and Old Encinitas that should be considered "target areas" for housing rehabilitation programs in the future.
- ° Increased development pressures will threaten much of the affordable housing in the coastal communities unless some programs directed at preserving this housing are implemented. The major resources include older single-family subdivisions and mobile home parks in the older sections of the City.

Sources of Information

Population data obtained from the 1980 U.S. Census provide insights into recent demographic trends that have taken place. There are seven census tracts that include areas within the incorporated boundaries of the City. Three of these tracts also include areas outside of the City though only one contains an area outside the designated sphere of influence. A number of adjustments were required which relied on block development data obtained from the 1980 census. to adapt census statistics for the latter tract so that the data would be useful. The boundaries of the census tracts are indicated in Figure 1.

A number of other drawbacks become evident when using data derived from the 1980 Census. First, the data is over eight years old, reflecting the conditions in the planning area in 1979 and 1980. Second, the census tract boundaries do not correspond with any officially recognized boundaries, either those of the City or the five individual communities that comprise the City. Finally, the conventions used in both the questionnaires and the final reports are not always compatible with those in use by the City, San Diego County, and SANDAG.



- Sphere of Influence
- Area Outside of Planning Area

Figure 1
Census Tract Boundaries

The only recent population and housing estimates for the City of Encinitas came from the San Diego Association of Governments (SANDAG). Because Encinitas was only recently incorporated, population statistics from the U.S. Census, State Department of Finance, and other sources are not readily available at this time.

POPULATION CHARACTERISTICS

Population Growth in Region

The entire Southern California region, including San Diego County, is among the fastest growing in the nation. The older, well established metropolitan areas that comprise San Diego and Los Angeles have been extending outward from these central cities. The northern portion of San Diego County, western San Bernardino and Riverside Counties, and southern Ventura County are the most recent areas to be developed around the older urban cores of Los Angeles and San Diego.

Southern California, which includes Imperial, San Diego, Riverside, San Bernardino, Los Angeles, Orange, Ventura, and Santa Barbara Counties grew from 11,668,707 persons in 1970 to 13,750,217 persons in 1980 representing a population gain of over 17%. During this same ten year period, San Diego County's population increased from 1,357,854 persons to 1,861,846 persons, a gain of 503,993 persons or 37%. The population trends of the 1970's show no sign of diminishing in the 1980's. Between 1980 and 1986 the population of the eight county area grew by an additional 1,807,283 persons (13%) compared with 303,654 persons (16%) for San Diego County.

**TABLE 1
REGIONAL POPULATION GROWTH**

COUNTY	POPULATION			CHANGE: 1970-1986	
	1970	1980	1986	No.	%
Imperial	74,492	92,110	105,800	31,308	42.0
Los Angeles	7,032,075	7,477,503	8,246,200	1,214,125	17.3
Orange	1,420,386	1,932,708	2,151,500	731,114	51.5
Riverside	459,074	663,166	838,700	379,626	82.7
San Bernardino	684,072	895,016	1,109,300	425,228	62.2
San Diego	1,357,854	1,861,846	2,165,500	807,646	59.5
Santa Barbara	264,324	298,694	335,100	70,776	26.8
Ventura	376,430	529,174	605,400	228,970	60.8
Total	11,668,707	13,750,217	15,557,500	3,888,793	33.3
Sources: U.S. Dept. of Commerce, Bureau of the Census California Dept. of Finance					

The population growth in the eight county region between 1970 and 1986 surpassed the 1980 population of 31 states. To place this population gain in perspective, the growth experienced in the region is more than the combined 1980 population of Nevada and Arizona. The total population of over 15,000,000 persons living in the eight county region is surpassed only by three states: California, New York and Texas. The total population growth experienced in San Diego County between 1980 and 1986 is comparable to the combined 1987 population of Carlsbad (55,282), Chula Vista (120,288), Escondido (86,863) and Poway (39,168).

The 1987 population of the City is estimated by SANDAG to be 51,341 persons, making Encinitas the ninth largest City in San Diego County. Overall, the population in the City of Encinitas grew by approximately 33% between 1980 and 1986, which represents an annual growth rate of roughly 6%. During this same period, San Diego County's population increased approximately 16%. A number of cities located in the surrounding region actually had growth rates that surpassed that of Encinitas including Carlsbad (56%), Chula Vista (43%), and Vista (42%). The nearby cities of Oceanside and Escondido also experienced substantial rates of growth (32% and 35% respectively) though the rates were less than that for Encinitas.

TABLE 2
POPULATION TRENDS: ENCINITAS AND SURROUNDING AREAS
1980-86

JURISDICTION	1980	1986	% INCREASE/DECREASE
Carlsbad	35,490	55,300	+55.8%
Chula Vista	83,927	120,300	+43.3%
Escondido	64,355	86,900	+35.0%
<u>Encinitas</u>	<u>36,318</u>	<u>48,558</u>	<u>+33.7%</u>
Oceanside	76,698	101,000	+31.7%
San Diego	875,538	1,022,400	+16.8%
Vista	35,834	50,900	+42.0%
San Diego County	1,861,846	165,500	+16.3%
Source: U.S. Bureau of the Census			
*SANDAG and DOF January 1, 1987			

Population growth can be attributed to three factors or components: 1. natural population increase due to increased birth rates, 2. a decrease in the death rate, and 3. persons moving into a region, which is referred to as "immigration." While national and statewide trends have resulted in increased births, the primary factor that is influencing population growth rates in Encinitas and the region is immigration. New residential development in recent years has attracted large numbers of persons to the City. This is evident when the growth in housing units for the individual communities between 1980 and 1986 is compared with population growth rates.

For the County as a whole, housing stock increased by approximately 14% compared to a 16% increase in population between 1980 and 1986. The housing stock within the City increased by approximately 14% compared to a population gain of over 33% indicating an influx of families with children.

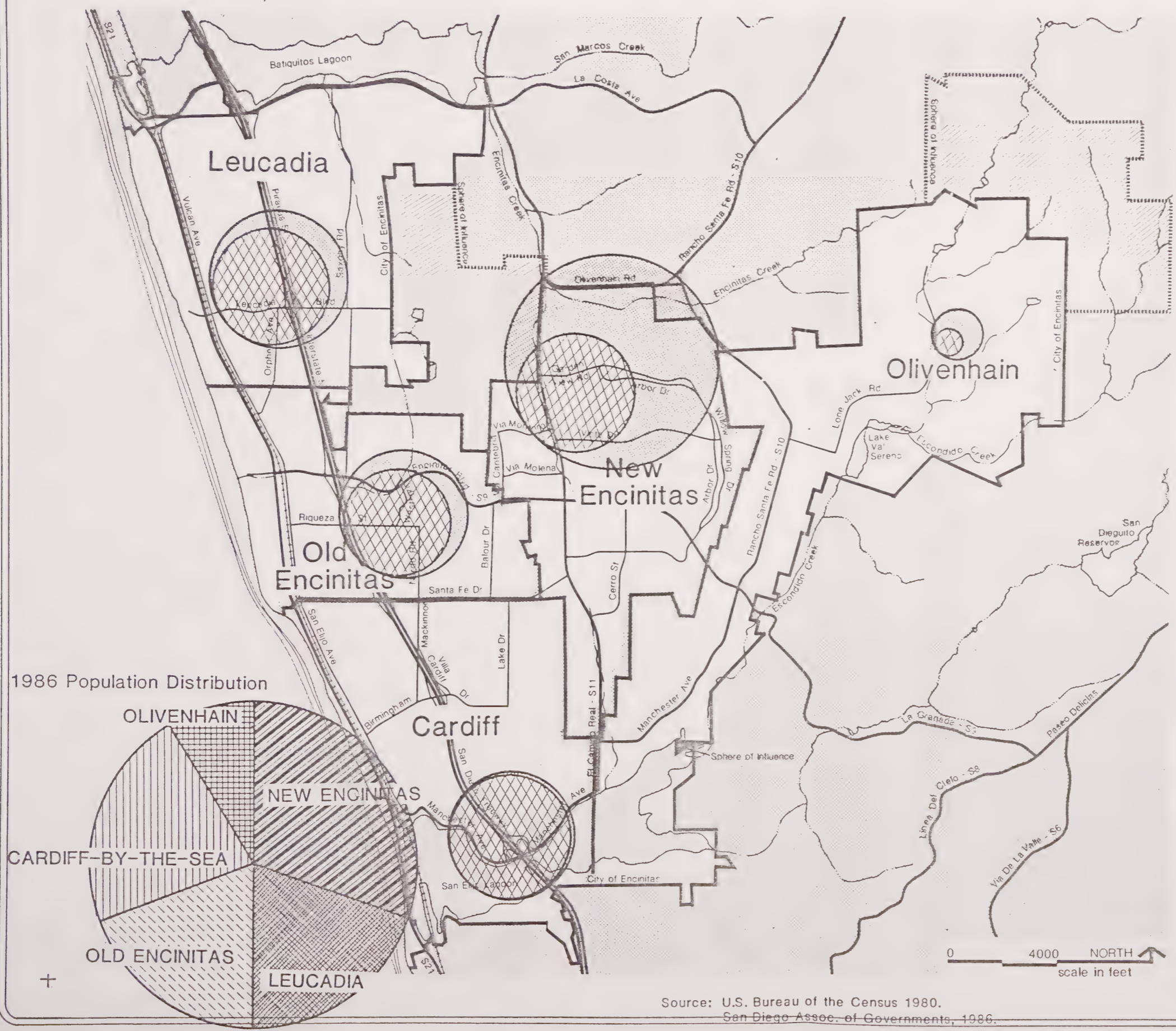
Population
Characteristics
of Communities

The population of the individual communities that comprise the City of Encinitas grew at varying rates between 1980 and 1986. The largest population increase in terms of absolute growth occurred in new Encinitas though the greatest proportional increase occurred in Olivenhain. The relative and absolute growth rates for the individual communities are summarized in Table 3 and Figure 2.

TABLE 3 COMMUNITY POPULATION TRENDS: 1980-86				
COMMUNITIES	1980	1986	Change 1980-86	
			#	%
Cardiff-by-the-Sea	9,076	9,498	422	4.6
Leucadia	8,543	10,069	1,526	17.9
New Encinitas	8,868	15,601	6,733	75.9
Old Encinitas	7,867	9,836	1,969	25.0
Olivenhain	1,964	3,554	1,590	81.0
Total	36,318	48,558	12,240	33.7
Source: CBA and SANDAG				

The communities with the greatest increases in population correspond with those communities experiencing the greatest residential development. Cardiff-by-the-Sea, for example, was nearly

urbanized in 1980 (with the exception of the area near San Elijo Lagoon), and most of the new development involved recycling and infill development. As a result, the population increase and the additional number of new housing units were small in comparison to the growth experienced in the other communities. A number of these older communities have experienced some infill development in recent years. Olivenhain and New Encinitas, on the other hand, have large tracts of land that were undeveloped and experienced substantial new residential development in the period between 1980 and 1987.



Cardiff By-The-Sea
 1980 Pop: 9,076
 1986 Pop: 9,498

Leucadia
 1980 Pop: 8,543
 1986 Pop: 10,069

New Encinitas
 1980 Pop: 8,868
 1986 Pop: 15,601

Old Encinitas
 1980 Pop: 7,867
 1986 Pop: 9,836

Olivenhain
 1980 Pop: 1,964
 1986 Pop: 3,554

1980 Population
 1986 Population

Figure 2
 Community Population Trends

Encinitas
 General Plan

Source: U.S. Bureau of the Census 1980.
 San Diego Assoc. of Governments, 1986.

SOCIO-ECONOMIC CHARACTERISTICS

The household is the basic economic unit and generally is used by planners, economists, and administrators to determine a city's housing needs. According to the Bureau of the Census, a household may include single persons living alone, families related through marriage or blood, and unrelated individuals living together. Virtually all of the socio-economic data included in the U.S. Census statistics are described in terms of households.

Household Characteristics

According to the 1980 Census, there were 13,937 households in the City. Of this number, 9,004 were families (64.6%), 3,076 were singles living alone (22.0%), and 1,857 were unrelated persons living together (13.4%). Although families were the dominant household type in all the census tracts, those tracts that were adjacent to the ocean had the highest proportion of single person households. This locational preference of singles may be due to a number of factors. Families generally choose to live farther from the beach in quiet, single-family neighborhoods where housing is more affordable, while single persons may prefer living in a higher density area near the beach.

Household Size

Household size is an important indicator identifying sources of population growth as well as overcrowding in individual housing units. A city's average household size will increase over time if there is a trend towards larger families. In communities where the population is aging, the average household size may actually decline.

The average household size for the City in 1980 was 2.57 persons per unit. In 1987, the average household size had grown to 2.66 persons per unit. This increase is due to a number of factors which correspond to both statewide and local trends.

First, couples in their late twenties and thirties are now having children, leading to a new "baby boom" among the "baby boomers." The generation of adults born after the Second World War delayed having children in the 1970s, which resulted in a significant decline in population growth rates during this period. This trend, much to the surprise of many demographers, was reversed in the 1980s, resulting in a new "baby boom" in recent years.

Secondly, a significant number of new housing units has been added to the City's housing inventory since 1980 with a majority of these units being single-family detached units. Married couples, many with children, have been attracted to the City due to the new housing opportunities.

There is considerable variation in the average household size among the five communities that comprise the City. Not surprisingly, the average household size of the three coastal communities of Leucadia (2.4 persons), Old Encinitas (2.5 persons), and Cardiff-by-the-Sea (2.6 persons) is substantially less than that for the inland communities of New Encinitas and Olivenhain both of which have an average household size of 3.0 persons. The average household size for San Diego County in 1986 was estimated by the Department of Finance to be 2.66 persons.

Overcrowding

The Bureau of the Census defines overcrowded units as those units with 1.01 or more persons per room. Those housing units with more than 1.5 persons per room are considered severely overcrowded. Overcrowding did not appear to be a major problem in Encinitas in 1980. Table 4 summarizes 1980 U.S. Census data for those tracts within the City. Those Census tracts with the highest percentage of overcrowded units are located in Leucadia and Old Encinitas.

**TABLE 4
OVERCROWDING IN THE CITY: 1980**

CENSUS TRACT	TOTAL HOUSEHOLDS	1.01 PERSONS/ROOM		1.5+ PERSONS/ROOM	
		#	%	#	%
171.01	433	2	.5	1	.2
171.02	1,794	18	1.0	7	.4
174.01	1,839	25	1.4	19	1.0
174.02	3,123	51	1.6	36	1.2
175	1,904	62	3.3	48	2.5
176	2,277	57	2.5	49	2.2
177	<u>2,853</u>	<u>62</u>	<u>2.2</u>	<u>85</u>	<u>3.0</u>
TOTAL	14,223	277	2.0	245	1.7

Source: U.S. Bureau of the Census, 1980.

Household Income

Household income is one of the most important variables in understanding the socio-economic characteristics of a community. The 1980 U.S. Census provided statistics concerning both actual annual incomes of the households surveyed in the census and the numbers of households with incomes less than the thresholds for poverty as defined by the Federal Government at that time.

According to standards established by the Department of Housing and Urban Development (HUD), household income groups are divided into four categories - very low income, low income, moderate income, and upper income. These income groups are defined as follows:

Very Low Income - Households earning less than 50% of the regional (County) median;

Low Income - Households earning between 51% and 80% of the regional median;

Moderate Income - Households earning between 81% and 120% of the regional median; and

Upper Income - Households earning greater than 120% of the regional median.

In 1980, the median household income for San Diego County was \$17,706. The thresholds for the four income categories as they relate to the 1980 County median are indicated in Table 5. The thresholds have been revised on an annual basis since 1937 to reflect changes in the prices for goods and services as well as changes in workers' earnings.

The State Department of Housing and Community Development released income levels for each category in San Diego County in 1987. These categories include very low and low, as defined by HUD, and the State Department of Housing and Community Development has established thresholds for median and moderate incomes. These limits vary depending on family size, as is indicated in Table 5.

Five out of the seven tracts which comprise Encinitas had median incomes above the County median in 1980. The two tracts with median incomes below the County median were 175 and 177. In addition, these two tracts had the highest percentages of

households in the very low income group. Tract 175, which is located in the community of Old Encinitas, had 24.6% of its households in the very low income category. Tract 177, located on the western side of the Leucadia community, had 22.5% of its households in the very low income group.

TABLE 5
INCOME LIMITS FOR FAMILIES OF VARYING SIZE: 1987

Income Category	1980 Income Level	1987 Income Limits based on Household Size							
		1	2	3	4	5	6	7	8
Very low income	less than 9,030	12,000	13,700	15,450	17,150	18,500	19,900	21,250	22,650
Lower income	9,030 - 14,165	17,550	20,100	22,600	25,100	26,650	28,250	29,800	31,400
Moderate income	14,166 - 21,247	22,000	25,100	28,250	31,400	33,350	35,350	37,300	39,250
Upper income	21,248 - over	26,400	30,150	33,900	37,700	40,050	42,400	44,750	47,100

Sources: U.S. Bureau of the Census, 1980.
Department of Housing and Community Development, March, 1987.

For the City of Encinitas, households considered to have very low incomes accounted for 16.7% of the total households in the City. The very low median incomes in Tract 175 and 177 may be related to the large number of single persons living in these tracts. As single heads of households with only one income, these households would tend to have lower incomes than a family household with two income earners.

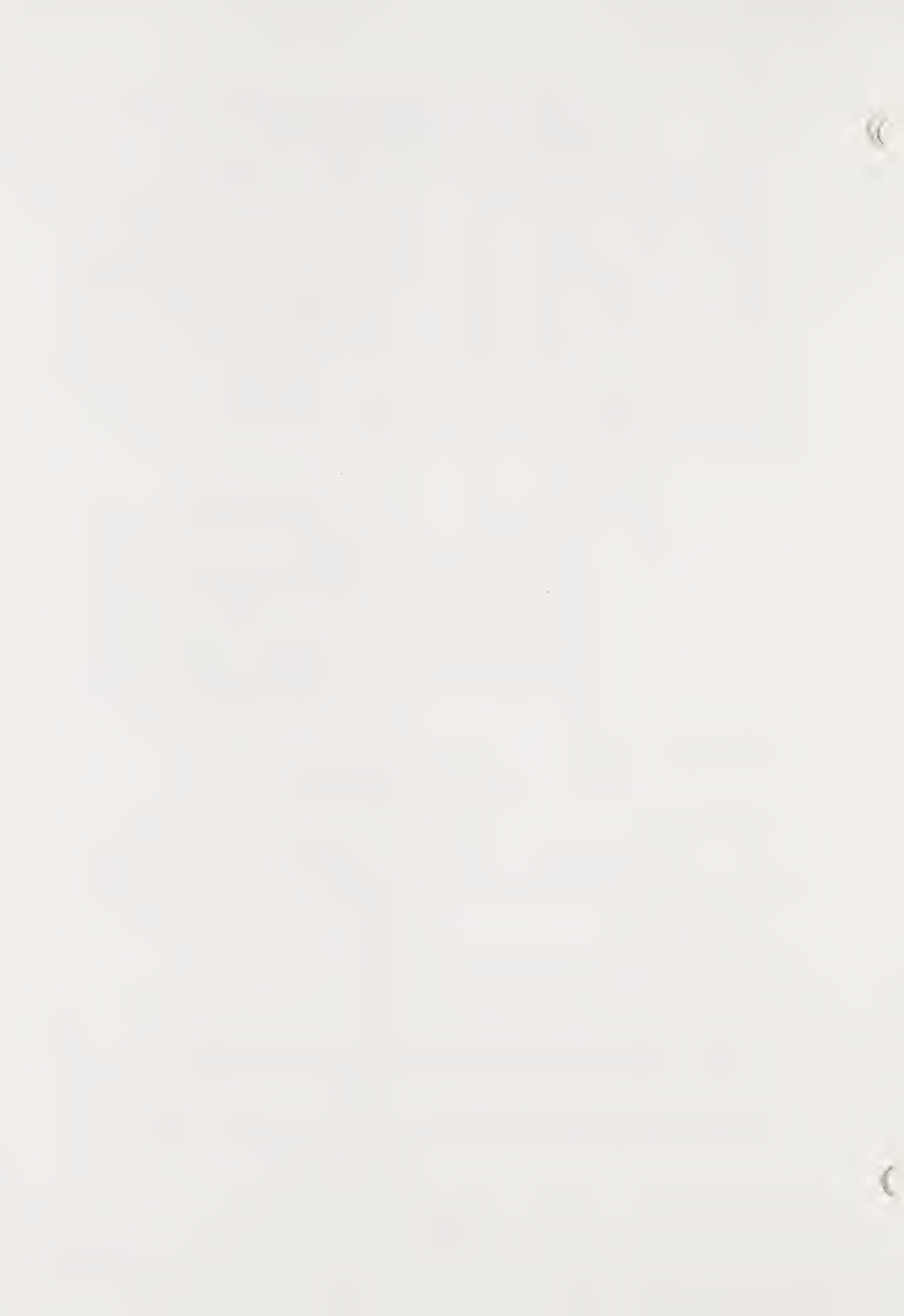
In 1980, 50% of the households in Encinitas had incomes in the upper category. The portion of Census Tract 171.01 within the City had a median income of \$45,723, more than two and one-half times the County median income. This part of Tract 171.01 is within the Olivenhain community.

The majority of households in Encinitas were in the moderate to upper income range in 1980. The 1980 Census indicated, however, that 804 households had annual incomes (in 1979) which were below the poverty level at that time.

TABLE 6 HOUSEHOLD INCOME CHARACTERISTICS: 1980										
Census Tract	Total Households	Very Low		Low		Moderate		Upper		Median
		#	%	#	%	#	%	#	%	
171.01	443	37	8.5	21	4.8	33	7.6	352	80.7	\$45,723
171.02	1,791	125	7.0	146	8.2	320	17.9	1,200	67.0	\$28,036
174.01	1,846	396	21.5	317	17.2	374	20.3	759	41.1	\$17,834
174.02	3,105	289	9.3	358	11.5	602	19.4	1,856	59.8	\$25,585
175	1,900	467	24.6	332	17.5	354	18.6	747	39.3	\$16,171
176	2,245	409	18.2	392	17.5	395	17.6	1,049	46.7	\$19,014
177	2,842	639	22.5	572	20.1	561	19.7	1,070	37.6	\$15,628
TOTAL	14,172	2,362	16.7	2,138	15.1	2,639	18.6	7,033	49.7	N/A*
Source: U.S. Bureau of the Census, 1980.										

Traditionally, female-headed households and the elderly experience a higher rate of poverty than other groups in a community. In the City of Encinitas in 1979, elderly households did not fit this pattern. Only 1.4% of all elderly households fell below the poverty line. Female headed households in poverty, however, numbered 222 or 17.3% of all female-headed households. Moreover, 215 of the impoverished female headed households included at least one child under the age of 18.

TABLE 7 POVERTY STATUS BY HOUSEHOLD TYPE: 1980		
Household Category	Number of Households in Poverty	Total Percent of Households in Category
Elderly	31	1.4 %
Families	551	6.0 %
With children under 18	429	4.7 %
Female Head	222	17.3 %
With children under 18	215	16.8 %
Without children	7	0.5 %
Note: Figures are not mutually exclusive and should not be added.		
Source: U.S. Bureau of the Census		



Housing Costs

A household, regardless of how low its income, is not considered to need housing assistance unless it is paying more than it can afford for housing. The Federal Department of Housing and Urban Development (HUD) had determined that households paying more than 30% of their gross monthly income for housing may be eligible for some form of housing assistance. This is especially true for lower income households.

Households with incomes less than \$10,000 represented the largest group City-wide paying more than 30% of their income for housing. Among renters with annual incomes less than \$10,000, 91.7% paid more than 30% of their income for housing. The proportion of homeowners earning \$10,000 or less but paying more than 30% of their income for housing was substantially less (53%) than among renters. As household incomes increase, the percentage of households spending 30% or more of their income on housing decreases. For instance, 54.8% of renters and 37.3% of owners with incomes from \$10,000-\$19,000 spent 30% of their income on housing. Generally, the higher income groups expend the smallest proportion of their income on housing. In Encinitas, this also appears to be true. For those households with an income of \$20,000 or more, only 5.4% of renters and 18.2% of owners spent 30% or more on housing. Household expenditures for each income category for the City are summarized in Table 8.

It is fairly typical for owners to overextend themselves financially to meet mortgage payments. The opportunity to own their own home and build equity in the property offsets the personal sacrifices they may make. Also, if the owner finds it difficult to meet financial obligations, the home can be sold. This option is not available to renters who must pay market levels for rent. In Encinitas, renters tend to pay a higher proportion of their income for housing costs than do owners. Forty-nine percent of renter households spent 30% or more of their income on housing, compared to approximately 27% of owner households.

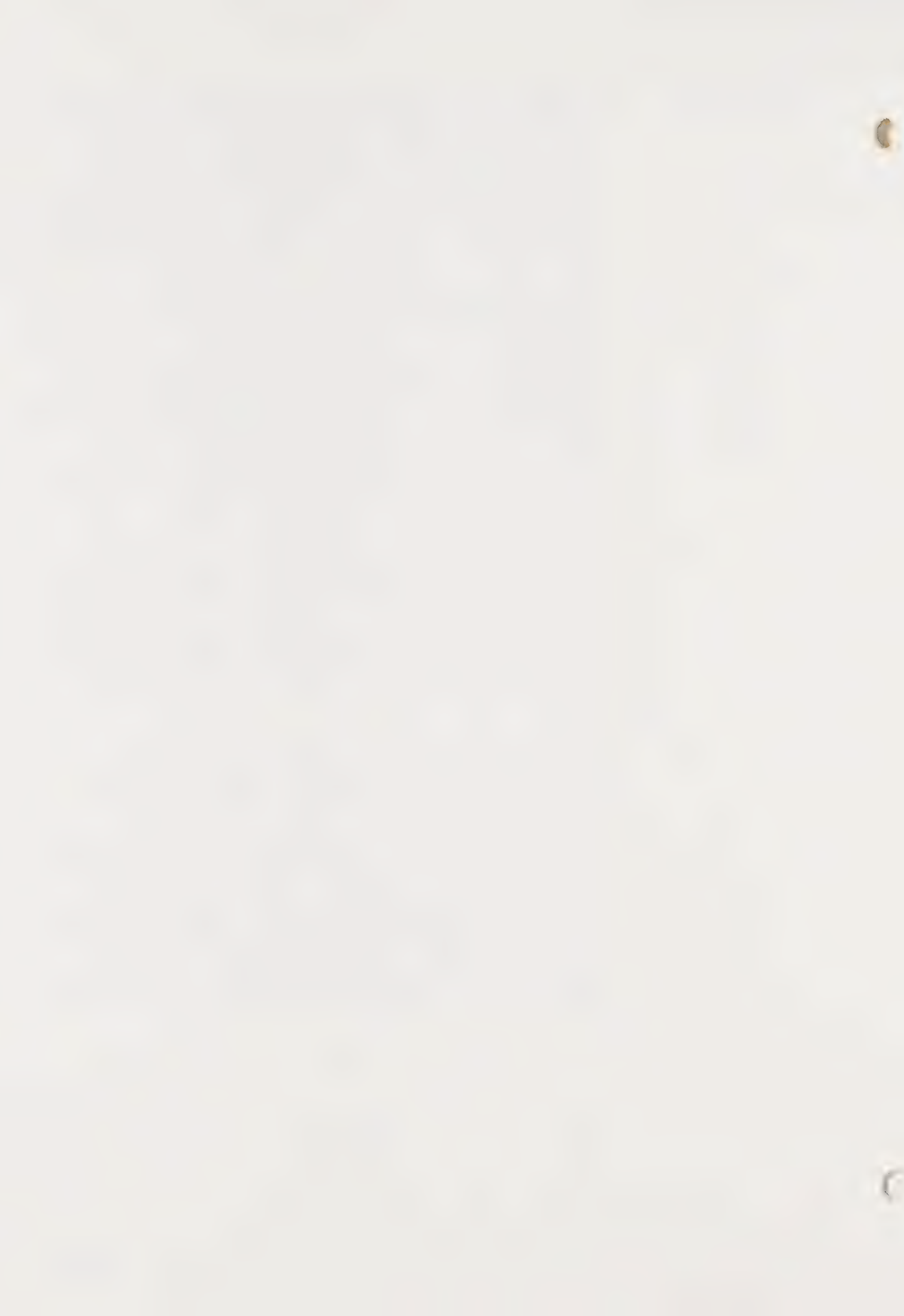


TABLE 8 HOUSEHOLD EXPENDITURES AS PERCENTAGE OF INCOME - 1979					
INCOME/COST	RENTER		OWNER		
	#	%	#	%	
Less than \$10,000					
Spent less than 25%	45	3.2	299	34.4	
Spent 25-29%	69	5.0	112	12.9	
Spent 30% or more	1,271	91.8	457	52.6	
\$10,000-\$19,999					
Spent less than 25%	540	25.6	661	52.9	
Spent 25-29%	413	19.6	123	9.8	
Spent 30% or more	1,154	54.8	466	37.3	
\$20,000 or more					
Spent less than 25%	1,259	77.6	3,140	72.7	
Spent 25-29%	276	17.0	395	9.1	
Spent 30% or more	88	5.4	787	18.32	
Source: U.S. Bureau of the Census, 1980.					

In 1980, housing costs in Encinitas varied substantially from area to area. For example, the 1980 Census indicates that the median value of homes in Tract 171.01 in the community of Olivenhain was over \$200,000. Tract 175, located in Old Encinitas, had the lowest median value for homes at \$107,600. The median value of housing in Encinitas overall was higher than the surrounding cities and the County as a whole.

Median contract rents for the census tracts within Encinitas were also higher than those for surrounding areas. Within the City, some interesting patterns were identified. Typically, rents in beach areas are slightly higher than rents in inland areas. In Encinitas, however, the tracts contiguous to the Pacific Ocean, 177, 175 and 174.01, actually had lower median contract rents than three of the tracts in the easternmost section of the City. Differences in the size types, and location of rentals within these areas may account for the disparities.

Table 9 displays data concerning home sales that closed escrow between January 1986 and June 1987 in the City of Encinitas. The price of single family homes ranged from a low of \$42,500 for a two bedroom home to a high of \$1,095,000 for a house with four or more bedrooms. Condominium prices range from \$61,500 for a one bedroom unit to \$350,000 for a two bedroom. Table 9 also indicates the median sales price for the different types of households in the City.

TABLE 9 ENCINITAS HOUSING COSTS: 1986-1987				
UNIT TYPE	Number of Units Sold	MEDIAN	AVERAGE	RANGE
Single Family				
2 bedrooms	168	\$140,000	\$141,703	\$ 42,500-\$400,000
3 bedrooms	532	\$154,500	\$169,390	\$ 85,000-\$515,000
4+ bedrooms	420	\$180,000	\$204,594	\$106,000-\$1,095,000
Total	1120	\$162,000	\$178,438	\$ 42,500-\$1,095,000
Condominiums				
1 bedroom	5	\$119,500	\$161,500	\$ 51,500-\$350,000
2 bedrooms	84	\$ 97,900	\$110,600	\$ 64,200-\$350,000
3 bedrooms	62	\$ 97,500	\$112,081	\$ 81,000-\$325,000
4+ bedrooms	2	N/A	\$146,750	\$136,000-\$157,500
Total	153	\$ 99,000	\$113,336	\$ 61,500-\$350,000
Source: California Housing Market Data Cooperatius, Inc., 1987.				

Special Needs Groups Overcrowded households are among those households included in a group of households which State housing authorities have determined to be Special Needs Groups. This group also includes the elderly, handicapped persons, large families, female headed households, and minorities. All these groups require special consideration in housing needs assessments. Table 10 shows the categories that were considered Special Needs Households in 1980.

TABLE 10 HOUSEHOLDS WITH SPECIAL NEEDS: 1980		
SPECIAL NEEDS CATEGORY	Number of Households	% of Total Households
Elderly (65+)	2,185	15.4
Handicapped	1,454	10.6
Large Families (5+ members)	1,223	8.6
Overcrowded	507	3.5
Female Headed	1,261	8.6
Note: Percentages will not total 100% since each category is mutually exclusive. A single household may appear in more than one category.		
Source: U.S. Bureau of Census		

HOUSING UNIT CHARACTERISTICS

Trends in Housing

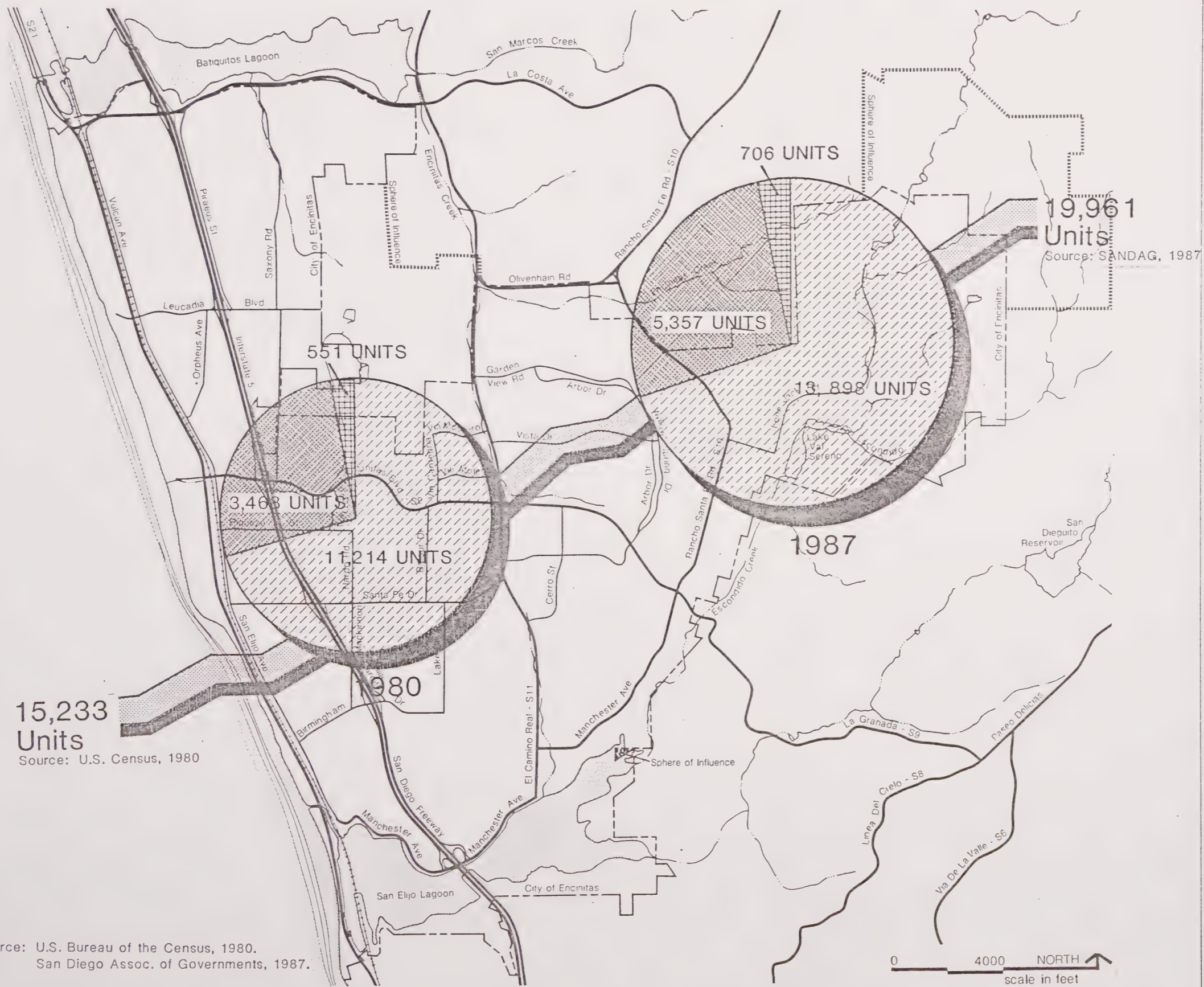
The 1980 Census included housing unit data for those census tracts that presently comprise the City. According to the this Census, there were 15,233 year-round housing units within the boundaries of Encinitas as they existed at the time of incorporation. In 1980, approximately 74% of the housing units were classified as single-family units, 8% were duplexes, 15% were classified as multiple-family (three or more units per structure), and slightly less than 4% were mobile homes.

Population and housing estimates for the City were provided from SANDAG after Encinitas incorporated and includes statistics for both 1986 and 1987 (refer to Table 11). According to SANDAG, there were an estimated 19,961 housing units in the City, representing an increase of over 31% (or 4,278 units) in the seven years following the 1980 Census. Of the total units estimated to be in the City in January, 1987, approximately 69% were single-family (both attached and detached), over 28% were classified as multiple family, and 3.6% were mobile homes.

Examination of Table 11 reveals that the housing stock in the City has increased by 4,961 units (35.9%) since 1980. Construction of new multiple-family units far outpaced the construction of single-family homes. In 1980, multiple-family units accounted for 22.8% of the City's total housing stock. This proportion had increased in 1987 to nearly 28%.

TABLE 11
HOUSING TRENDS: 1980-87

TABLE 11 HOUSING TRENDS: 1980-87					
HOUSING TYPES	NO. OF HOUSING UNITS			CHANGE	
	1980	1986	1987	#	%
Single-family	11,214	13,345	13,898	2,694	24.0
Multiple-family	3,468	4,866	5,357	1,899	54.5
Mobile Homes	<u>551</u>	<u>712</u>	<u>706</u>	<u>155</u>	28.1
Total housing units	15,233	18,923	19,961	4,728	31.0
Total occupied units	14,917	17,918	19,158	4,961	35.9
% Vacant	6.8%	5.3%	4.0%	N/A	
Sources: U.S. Bureau of the Census, 1980. San Diego Association of Governments (SANDAG) 1986, 1987.					






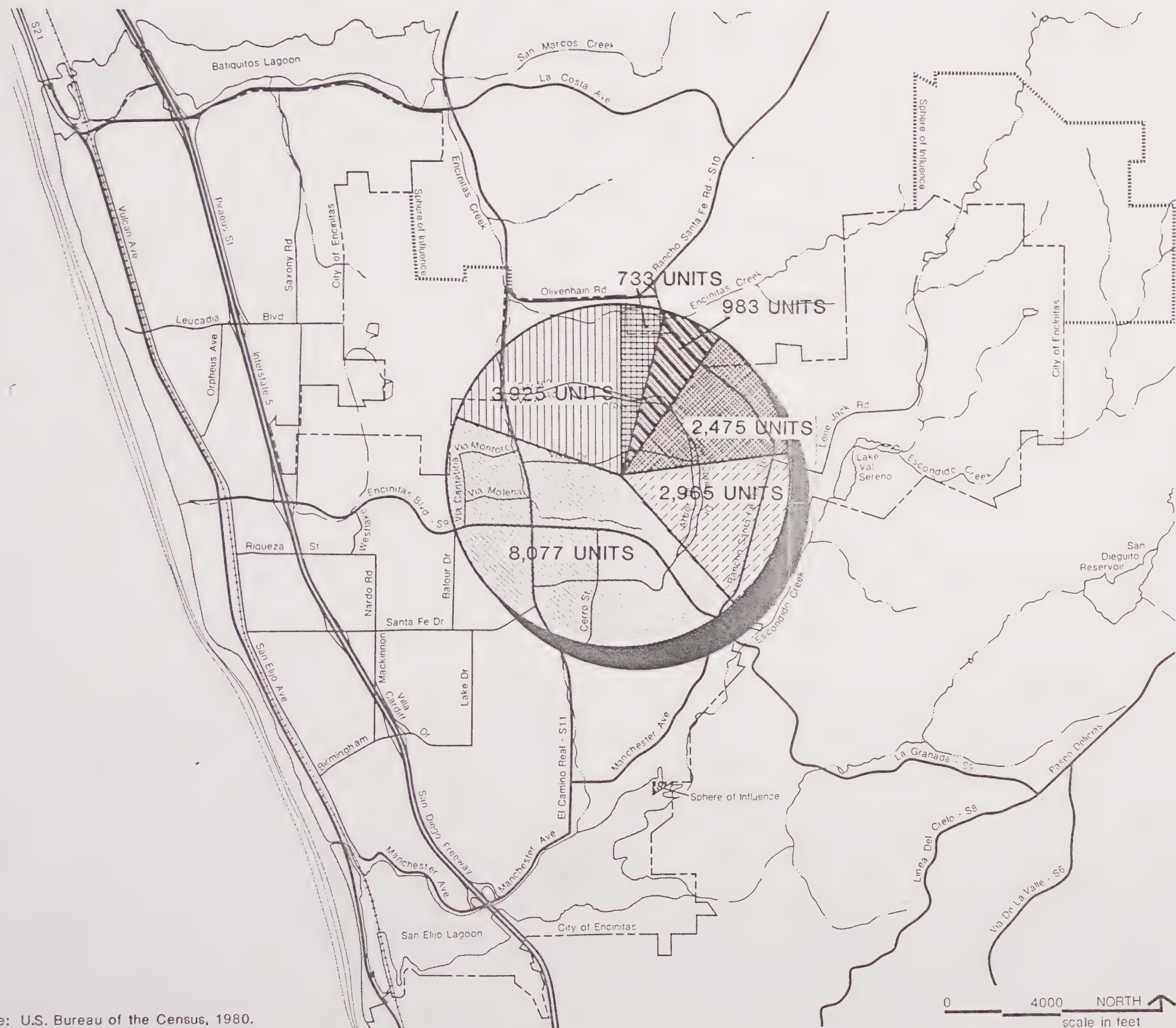
-  Single-Family Units
-  Multiple-Family Units
-  Mobile-Homes

Figure 3
Housing Trends: 1980-1987

Encinitas
General Plan



Source: U.S. Bureau of the Census, 1980.
San Diego Assoc. of Governments, 1987.

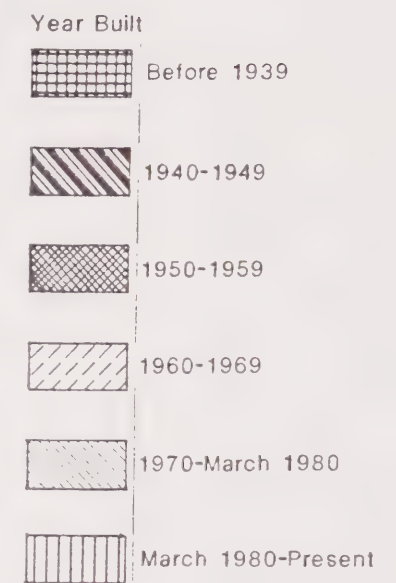


Figure 4
Age of Housing

Encinitas
General Plan

0 4000 NORTH
scale in feet

The State requires local governments to identify substandard units within their jurisdiction as part of the Housing Element requirements. A housing condition survey was conducted in October 1987 to estimate the number of housing units that were in substandard condition and required maintenance as well as those units that were dilapidated requiring demolition. The survey categorized units employing a classification system devised by the U. S. Bureau of the Census and used in the 1960s. This classification system includes three categories:

1. Adequate Condition - No defects or slight defects which can be corrected with routine maintenance;
2. Deteriorating Condition - Intermediate defects requiring repair to ensure that units are safe and adequate shelter and repairs are more extensive than that which would normally be correctable by routine maintenance; and
3. Dilapidated Condition - Serious structural defects are present making the unit unsafe for habitation.

The survey also made an effort to identify possible housing conversions. In some instances, garages and other structures are converted to living areas and then rented and the work is done without proper building permits and the converted units are not inspected after they are completed. A number of safety hazards and defects (faulty wiring, plumbing or structural construction) may be present which could endanger the occupants.

The field survey focused on the communities of Old Encinitas, Leucadia, and Cardiff-by-the-Sea where most of the older housing is located. The survey found that, for the most part, substandard units are located in small concentrations, primarily in Leucadia and Old Encinitas.

All of the units identified in Old Encinitas as being in deteriorating condition were located between I and G Streets. A number of possible housing conversions were also identified in the alleys in this area. The survey identified 10 substandard units and 16 units that appeared to be housing conversions.

The survey in Leucadia found two major concentrations of substandard housing,. One area includes the older Avocado Acres subdivision and the second area included the alleys to the rear of the commercial strip along Highway 101. In addition, there are a large number of motels that serve as transitional residences and have monthly and weekly room rates as well as kitchenettes. In Leucadia, there are also a number of older mobile home parks that also provide much of the affordable housing in the area. The parks mobile home parks are well maintained even though many of the mobile homes are between 8 to 12 feet wide, typical of the types constructed in the 1950's and early 1960s.

Homeless in the City

In spite of the relative affluence in the City, there is a substantial number of persons in the City that are homeless. Many of these persons are undocumented workers who live in temporary shelters constructed in the undeveloped wilderness areas within the City. The campsites and parking areas at San Elijo State Park are also frequented by homeless individuals and families. The precise number of homeless persons is difficult to estimate since there are no reliable methods available for counting homeless persons. In addition, the transient nature of many of these persons adds to the difficulties of obtaining reliable estimates.

A study completed by San Diego County in 1980 estimated the undocumented population within the County was 72,000 persons. Most of these persons are from Mexico and Central America and have come to the United States to escape the economic and political turmoil within the region. Deteriorating economic conditions in Mexico and an escalation of warfare in the Central American states will result in increased numbers of undocumented persons coming to California. The presence of undocumented workers is evident in the City with many persons lined up along Encinitas Boulevard and other major roadways waiting to be picked up for work. During the early morning hours, Monday through Friday, between 20 and 50 persons have been observed standing along Encinitas Boulevard soliciting work.

There are no emergency shelters located within the City of Encinitas though there are a number of facilities located elsewhere that provide the homeless with temporary shelter. These facilities are described in Table 15. Only those facilities that serve all of San Diego County are listed in Table 15.

TABLE 15
HOMELESS SHELTERS SERVING SAN DIEGO COUNTY

Name	Location	Description
St. Claire's Home	South Orange	shelter for women and emancipated minors (capacity- 30)
Southeast Emergency Quarters	San Diego	shelter for battered women and children (capacity- 26)
St. Vincent dePaul Shelter	San Diego	shelter for singles, familieis and couples (capacity-200)
Women's Resource Center	San Luis Rey	shelter for battered women and children (capacity- 16)
Hidden Valley House	Escondido	shelter for battered women and children (capacity- 15)
Source: California Homeless Coalition. California Homeless Shelter Provider Directory. 1987		

EMPLOYMENT CHARACTERISTICS

Resident Population

According to the U.S. Census, 74.4% of the residents of the City 16 years of age and over worked either part or full time in 1979. Table 16 indicates that managerial or professional workers comprised the largest occupation category. Typically, these "white collar" occupations pay higher salaries than other types of employment. In 1979, Tract 171.01 and 171.02 had a high percentage of households in the upper income category, and both tracts had many residents employed in managerial or professional occupations.

The U.S. Census reported that 5131 families in Encinitas had two or more workers in them. Census data for 1980 reveals that two or more workers in the family was much more common than one worker per family. In fact, 56% of the families had two or more workers in them. This is consistent with a national trend as families find it necessary to have two wage earners in a family to maintain that family's standard of living.

TABLE 16
OCCUPATIONS OF ENCINITAS RESIDENTS BY CENSUS TRACTS - 1979

OCCUPATION	171.01	171.02	174.01	174.02	175	176	177	TOTALS
Managerial or Professional	220	1073	765	1452	779	747	1025	6061
Technical, Sales or Administrative Support	142	938	767	1480	631	650	1082	5690
Service	65	228	305	410	437	306	534	2285
Farming, Forestry Fishing	23	39	159	138	218	314	183	1074
Precision Production Craft, Repair Operators	36	318	314	425	341	270	439	2143
Fabricators, Laborers	16	93	142	443	304	152	254	1404

Source: U.S. Census

LAND USE ELEMENT TECHNICAL REPORT

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UNIVERSITY OF CALIFORNIA

ENCINITAS
General Plan

LAND USE ELEMENT TECHNICAL REPORT
CITY OF ENCINITAS GENERAL PLAN

December 1987

Prepared by:

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#482

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	LUTR-1
Purpose of this Report	LUTR-1
Sources of Information	LUTR-3
EXISTING LAND USE	LUTR-4
Residential Land Use	LUTR-7
Commercial and Industrial Land Use	LUTR-7
Other Land Uses	LUTR-9

LIST OF TABLES

<u>Table</u>	<u>Page</u>
Table 1: Distribution of Land Use	LUTR-4
Table 2: Distribution of Residential Land Use	LUTR-8
Table 3: Distribution of Commercial/Industrial Land Use	LUTR-9
Table 4: Distribution of Open Space/Public/ Quasi-Public Land Uses	LUTR-10

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
Figure 1: Distribution of Land Use in Planning Area	LUTR-5
Figure 2: Distribution of Land Use by Community	LUTR-6

INTRODUCTION

Purpose of this Report

This Technical Report describes the land uses within the five individual communities that comprise the City. This report contains land use statistics for the five individual communities, discusses recent development trends and provides a description of existing land use plans and programs that need to be considered.

City of Encinitas has experienced significant growth in recent years with most of this new development being residential. In addition, new commercial development has occurred along several major roadways that traverse the City. Up until incorporation, development approvals and planning were the responsibility of San Diego County. In recent years, however, many local residents were displeased with past land use decisions made by the County and this displeasure ultimately led to incorporation.

The nature of land use and development in the City has contributed to the unique character of the five individual communities that comprise the City. Patterns of residential development, for example, are very different among the five communities. A number of important land use issues have emerged in recent years within the individual communities:

- ° Higher density multi-family development has been allowed to intrude into predominantly single-family neighborhoods. In a number of instances, the higher density developments were constructed without adequate parking and buffering from the adjacent homes.
- ° The existing commercial corridor along Highway 101 as it passes through the communities of Leucadia and New Encinitas is in need of rehabilitation and revitalization. In addition to an increasingly blighted appearance along portions of the corridor, there has been an increase in crime in recent years. The lack of parking and area available for expansion has also contributed to the general decline of the area.

- ° Many newer homes constructed in the coastal communities of New Encinitas, Leucadia, and Cardiff-by-the-Sea are out of scale with existing homes in the surrounding neighborhood. The County in past years was quite liberal in applying development standards for these homes with the net result being large units constructed on very small lots.
- ° Circulation between and access to and from the newer commercial shopping centers need improvement. Many of the newer centers constructed along Encinitas Boulevard and El Camino Real do not have adequate internal connections to permit travel between them.
- ° Many of the residents living in the City feel their neighborhoods are rural in character and are determined to preserve this "feeling of country." Maintaining lower development densities, allowing certain roadways to remain without curbs and gutters, and maintaining the existing street trees are ways the residents feel that this rural atmosphere can be preserved.
- ° Many of the older business districts are in need of rehabilitation and revitalization. More specifically, ongoing revitalization of the older "downtown" in Old Encinitas and Cardiff business district need to be continued and possibly expanded.
- ° A number of environmental constraints need to be considered before any future development occurs in certain areas of the City. Development along the coastal bluffs will continue to be an issue from both an aesthetic and environmental standpoint with the stability of the bluffs being a primary concern. Other environmental issues facing the City include the destruction of sensitive habitats to make way for new development, the increased potential danger from wildfire as the northern and eastern portions are developed, and the potential for flooding due to the alteration of natural drainage patterns.

- ° The extent of new development and the pace at which this development has occurred has placed a burden on existing public facilities and services. Efforts to maintain the existing level of services will require considerable public expense to finance the needed capital improvements.

Sources of Information

Existing land use information was obtained from surveys conducted by City residents and consultants involved in the General Plan program. Community residents conducted a Citywide land use survey in early 1987 which was made available to the consultants. The consultant team then field checked the earlier survey data to make sure more recent development had been identified. Finally, aerial photographs were used in the preparation of maps indicating the location and extent of the existing land uses.

Once the mapping of existing land use was complete, the information was digitized and encoded into a computer. The area of each land use use category (eg. single-family, multiple-family, commercial, etc.) was tabulated and a final map indicating the location and extent of existing land uses was prepared.

EXISTING LAND USE

Distribution of Land Use

The total land area of the Encinitas Planning Area is 13,196 acres or 20.62 square miles. Of this area, 11,413 acres (17.8 square miles) is within the incorporated boundaries of the City. The unincorporated area within the City's designated sphere of influence totals 1,783 acres (2.8 square miles). Residential land uses account for approximately 41% of the total land area of the Planning Area. Approximately 86% of the land developed for residential uses is single-family. Commercial, industrial, and public land uses account for approximately 3%, 0.1%, and 3% respectively. Undeveloped open space which includes land in wilderness areas that may be developed in coming years as well as land that is currently under some form of agricultural production totals 5,109 acres (7.98 square miles). The distribution of land uses in the entire Planning Area and the five individual communities are detailed in Table 1 and represented graphically in Figures 1 and 2.

TABLE 1
DISTRIBUTION OF LAND USE

Category	Cardiff by the Sea	Leucadia	New Encin.	Old Encin.	Oliven Hain	Uninc.	Total
Residential							
Single-family	787.5	879.0	1194.7	520.0	1214.1	12.5	4607.8
Duplex	34.8	48.5	0.0	114.1	0.0	0.0	197.4
Mult.-family	95.8	111.5	214.2	97.1	0.0	0.0	518.6
Mobile-home	0.0	20.4	27.5	5.4	0.0	0.0	53.3
subtotal	918.1	1059.4	1436.4	736.6	1214.1	12.5	5377.1
Commercial	52.7	50.6	163.3	151.5	28.4	0.0	446.5
Industrial	0.0	2.6	2.6	13.6	0.0	0.0	18.8
Public/ Quasi-Pub.							
Facility	74.5	15.2	82.9	177.9	0.9	7.3	377.5
Open Sp.	628.4	32.5	285.2	84.7	362.3	16.1	1409.2
Agriculture	247.1	280.9	65.6	173.6	48.6	722.5	1538.3
Undeveloped	80.7	559.9	183.0	146.5	1576.7	1024.9	3571.7
Other	217.6	144.0	0.0	114.3	0.0	0.0	479.5
Total	2219.1	2145.1	2219.0	1598.7	3231.0	1783.3	13196.2

Source: Cotton/Beland/Associates, November 1987.

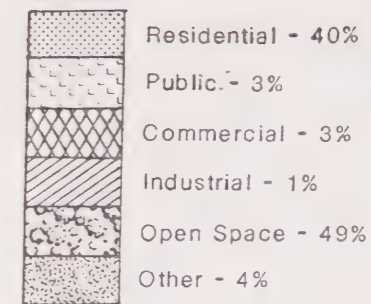
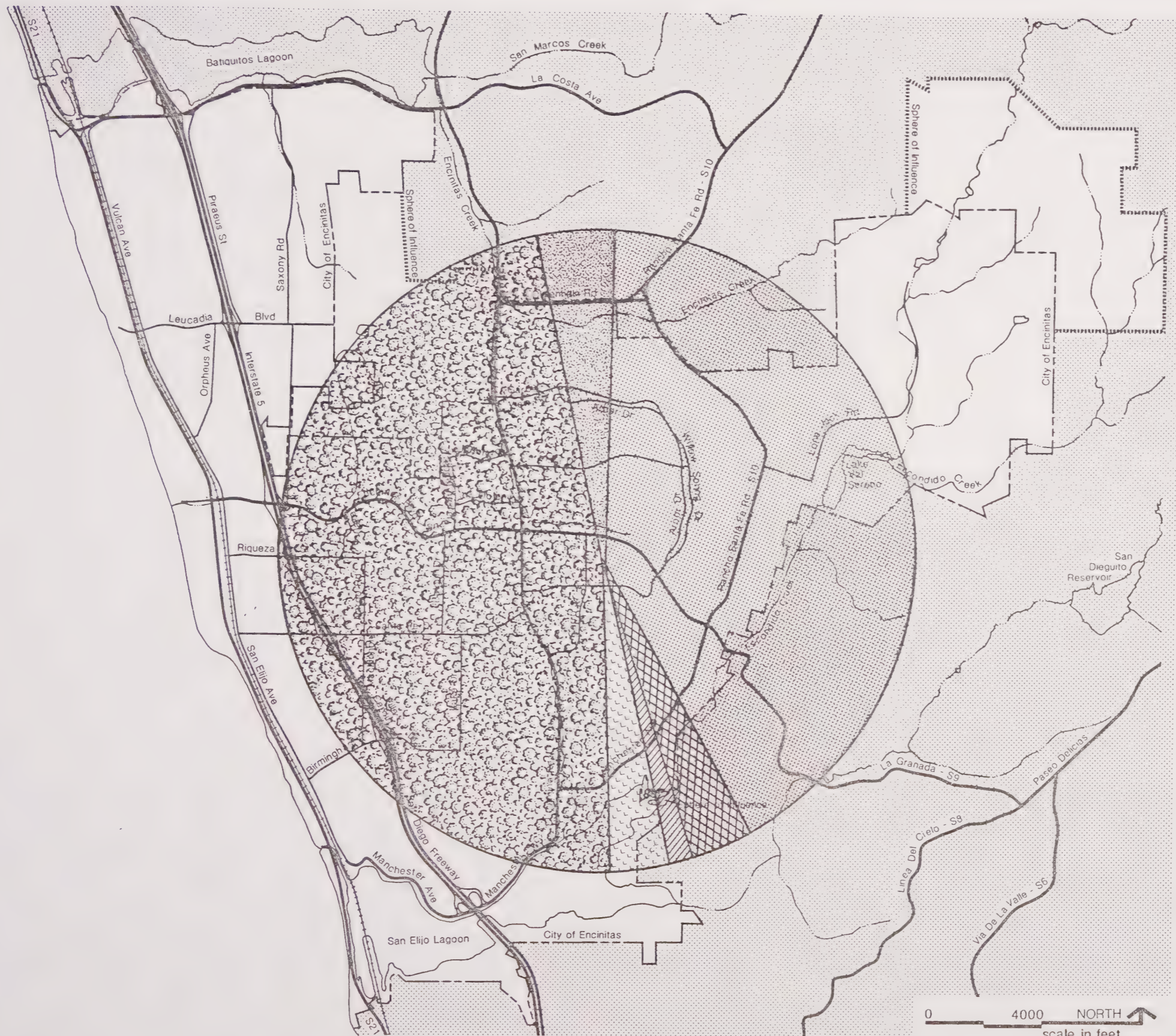
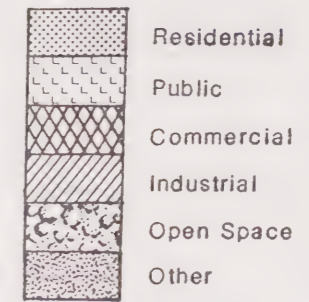


Figure 1
Land Use Distribution
Citywide

Encinitas
General Plan



Cardiff by the Sea
Area: 2,219 acres
Percent: 17%

Leucadia
Area: 2,145 acres
Percent: 16%

New Encinitas
Area: 2,219 acres
Percent: 17%

Old Encinitas
Area: 1,599 acres
Percent: 12%

Olivenhain
Area: 3,231 acres
Percent: 24%

Unincorporated
Area: 1,783 acres
Percent: 14%

Figure 2
Land Use Distribution
By Community

Encinitas
General Plan

Residential Land Use

Approximately 5,377 acres or 40.8% of the total land within the Planning Area is developed as residential. Single-family residential uses account for approximately 4,607 acres (34.9% of the total land area within the Planning Area). Approximately 519 acres of within the Planning Area is developed as multiple-family residential (three or more units per structure) and 197.4 acres are developed as duplexes. Finally, mobile homes account for only 53 acres or less than one half of one percent of the Planning Area's total land area. The distribution of residential development within the five communities and the unincorporated areas are detailed in Table 2.

Commercial and Industrial Land Use

Commercial development Citywide totals 446.5 acres. The commercial land use categories of have been further subdivided into office professional, local commercial, general commercial, and visitor-serving commercial. The general commercial category is the largest category of commercial land use (284.6 acres) followed by office professional with 109.0 acres, local commercial with 17.9 acres, and visitor serving commercial land uses accounting for 34.1 acres.

Commercial development in the Planning Area is concentrated along several major transportation corridors including Encinitas Boulevard, El Camino Real, and Old Highway 101. In addition, several older business districts are located in the communities of Old Encinitas and Cardiff-by-the-Sea, and in smaller centers located elsewhere in the City.

Industrial land uses are minimal, accounting for only 18.1 acres in the City. Most of the activities classified as industrial are located in or near commercial districts. Many of these activities have a retailing, wholesaling, or service function related to their operation.

The distribution of commercial and industrial land uses is described in Table 3. Table 3 also indicates the distribution of these land uses within the five communities that comprise the City as well as the unincorporated areas within the City's designated areas sphere of influence.

TABLE 2
DISTRIBUTION OF RESIDENTIAL DEVELOPMENT

Category/ Density	Leucadia	Old Encin.	Cardiff by the Sea (area in acres)	New Encin.	Oliven- hain	Sphere	Total
Single-Family Residential							
0-.25	0.0	0.0	0.0	0.0	468.3	0.0	483.3
.25-.50	0.0	0.0	0.7	11.6	79.3	0.2	91.8
.51-1.0	15.7	29.3	173.2	9.6	278.7	0.4	506.9
1.01-2.0	152.4	61.6	74.4	55.0	283.4	0.0	626.8
2.01-3.0	305.2	121.7	70.1	196.2	65.5	0.5	759.2
3.01-5.0	231.5	139.2	123.4	437.4	9.1	10.9	951.5
5.01-8.0	155.7	97.7	258.9	428.8	29.8	0.5	971.4
8.01-11.0	18.5	42.6	68.0	56.1	0.0	0.0	185.2
11.01-15.0	0.0	27.9	18.8	0.0	0.0	0.0	46.7
Duplex Residential Development							
3.01-5.0	12.1	21.3	9.4	0.0	0.0	0.0	42.8
5.01-8.0	19.2	2.5	4.8	0.0	0.0	0.0	26.5
8.01-11.0	17.2	61.2	4.0	0.0	0.0	0.0	82.4
11.01-15.0	0.0	14.6	10.3	0.0	0.0	0.0	24.9
15.01-20.0	0.0	8.9	5.4	0.0	0.0	0.0	14.3
20.01-25.0	0.0	5.6	0.9	0.0	0.0	0.0	6.5
Multiple-Family Residential Development							
5.01-8.0	16.0	2.8	23.4	119.7	0.0	0.0	161.9
8.01-11.0	59.4	5.3	29.9	70.2	0.0	0.0	164.8
11.01-15.0	4.8	19.6	35.6	0.0	0.0	0.0	60.0
15.01-20.0	27.2	18.6	5.3	13.4	0.0	0.0	64.5
20.01-25.0	4.1	13.7	1.6	0.3	0.0	0.0	19.7
25.01-35.0	0.0	37.1	0.0	10.6	0.0	0.0	47.7
Mobile-Home Development							
8.01-11.0	0.9	0.0	0.0	27.5	0.0	0.0	28.4
11.01-15.0	10.3	0.0	0.0	0.0	0.0	0.0	10.3
15.01-20.0	6.9	0.0	0.0	0.0	0.0	0.0	6.9
25.01-35.0	2.3	5.4	0.0	0.0	0.0	0.0	7.7
Total Residential	1059.4	736.6	918.1	1436.4	1214.1	12.5	5377.1

Source: Cotton/Beland/Associates, November 1987.

TABLE 3
DISTRIBUTION OF COMMERCIAL/INDUSTRIAL LAND USE

Category	Leucadia	Old Encin.	Cardiff by the Sea (area in acres)	New Encin.	Oliven hain	Sphere	Total
Office-Professional	5.7	46.1	3.0	41.2	3.9	0.0	109.9
Local Comm.	0.0	1.4	2.0	0.0	4.5	0.0	17.9
General Comm.	35.8	94.0	32.7	122.1	0.0	0.0	284.6
Visitor-Serv.	<u>9.1</u>	<u>10.0</u>	<u>15.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>34.1</u>
Total Commercial	50.6	151.5	52.7	163.3	8.4	0.0	446.5
Industrial	2.6	32.6	0.0	2.6	0.0	0.0	18.8

Source: Cotton/Beland/Associates, November 1987.

Other Land Uses

The remaining land uses in the Planning Area include public, quasi-public, and open space land uses. The latter category includes such things as land under some form of agricultural production, public open space in parks and preserves, and undeveloped vacant land. More than 27% percent of the Planning Area is presently undeveloped. Much of this this total area is environmentally constrained due to slope, potential flood hazard, or other constraints that will prevent future development.

Equally significant is the amount of land presently under some form of agricultural production. Nearly 12% of the total land area is under some form of agricultural production, most of which involves the growing and production of cut flowers. Nearly half of this acreage is located in the unincorporated area in the northern portion of the Planning Area which includes the Ecke land holdings. Other areas with a substantial amount of land involved in agricultural production includes Leucadia (280.9 acres), Cardiff-by-the-Sea (247.1 acres) and Old Encinitas (173.6 acres).

The distribution of the public, quasi-public, and open space land uses are detailed in Table 4.

TABLE 4
DISTRIBUTION OF OPEN SPACE/PUBLIC/
QUASI-PUBLIC USES

Category	Leucadia	Old Encin.	Cardiff by-the Sea	New Encin.	Oliven hain	Uninc.	Total
Agriculture	280.9	173.6	247.1	65.6	98.6	722.5	1538.3
Undeveloped	559.9	146.5	80.7	183.0	1576.7	1024.9	3571.7
Public/Quasi-Public							
Facilities	15.2	177.9	74.5	82.9	0.9	7.3	377.5
Open Space	<u>32.5</u>	<u>84.7</u>	<u>628.4</u>	<u>285.2</u>	<u>362.3</u>	<u>16.1</u>	<u>1409.2</u>
Total	888.5	582.7	1030.7	616.7	1988.5	1770.8	6896.7

Source: Cotton/Beland/Associates, November 1987.

NOISE ELEMENT
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Encinitas
General Plan

NOISE ELEMENT TECHNICAL REPORT
CITY OF ENCINITAS GENERAL PLAN

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TABLE OF CONTENTS

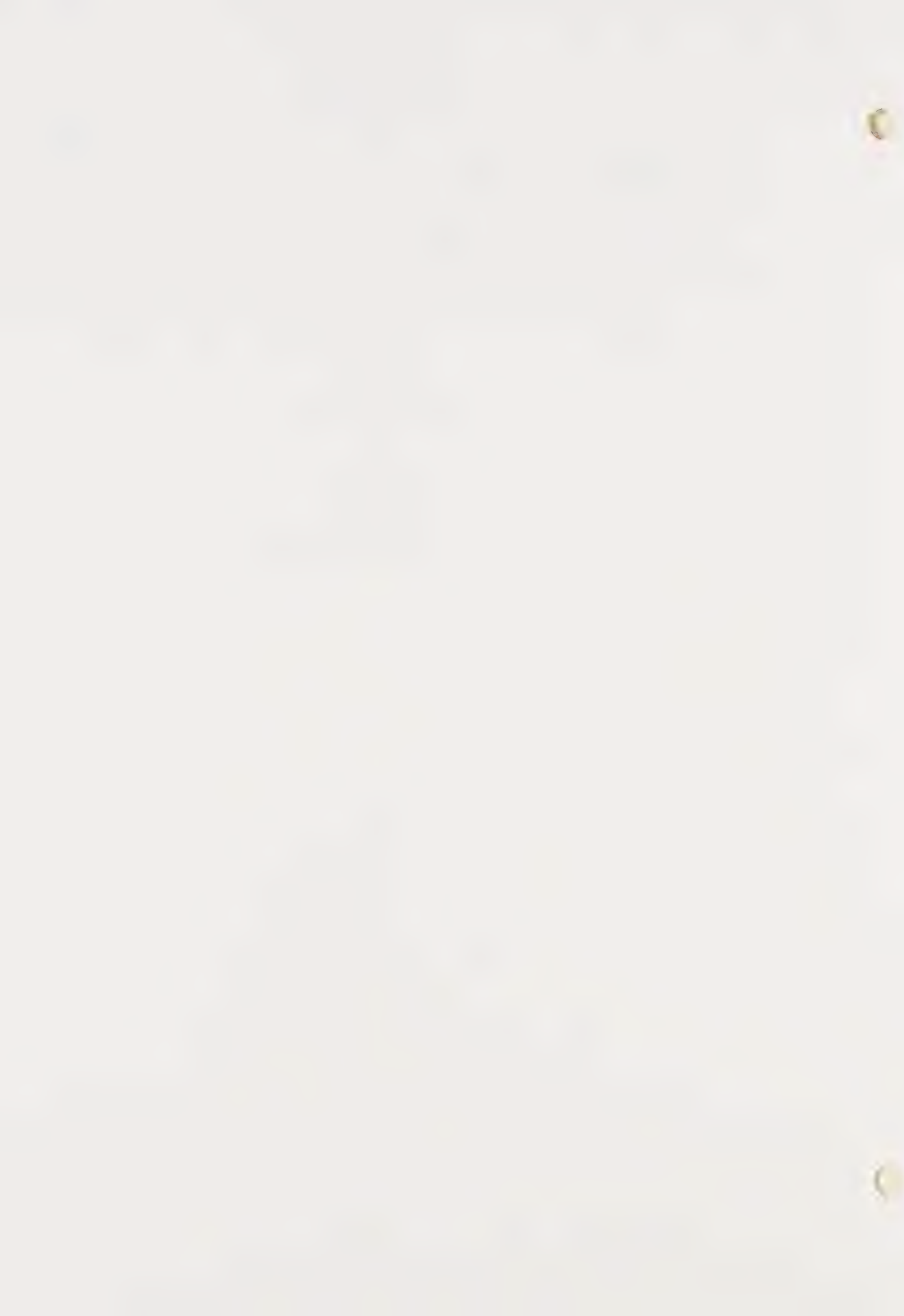
	<u>Page</u>
INTRODUCTION	1
Characteristics of Sound	1
Noise and Land Use Compatibility	2
EXISTING NOISE ENVIRONMENT	6
Noise Sources	6
Noise Exposure	6
Noise Sensitive Land Uses	9

LIST OF TABLES

	<u>Page</u>
Table 1: EPA Noise Guidelines	3
Table 2: Point Source Measurements: Major Traffic Corridors	10
Table 3: Summary of Short-term Measurements	11

LIST OF FIGURES

	<u>Page</u>
Figure 1: Land Use Compatibility Matrix	5
Figure 2: Noise Exposure - Existing Conditions	7



INTRODUCTION

The residents of Encinitas are exposed to a range of noise levels from a variety of sources common in an urban setting. The predominant source of noise in the City, as in most other communities, is related to the operation of motor vehicles. The Interstate 5 freeway and a number of arterials with high traffic volumes subject residents to significant levels of noise, particularly in those areas immediately adjacent to those roadways.

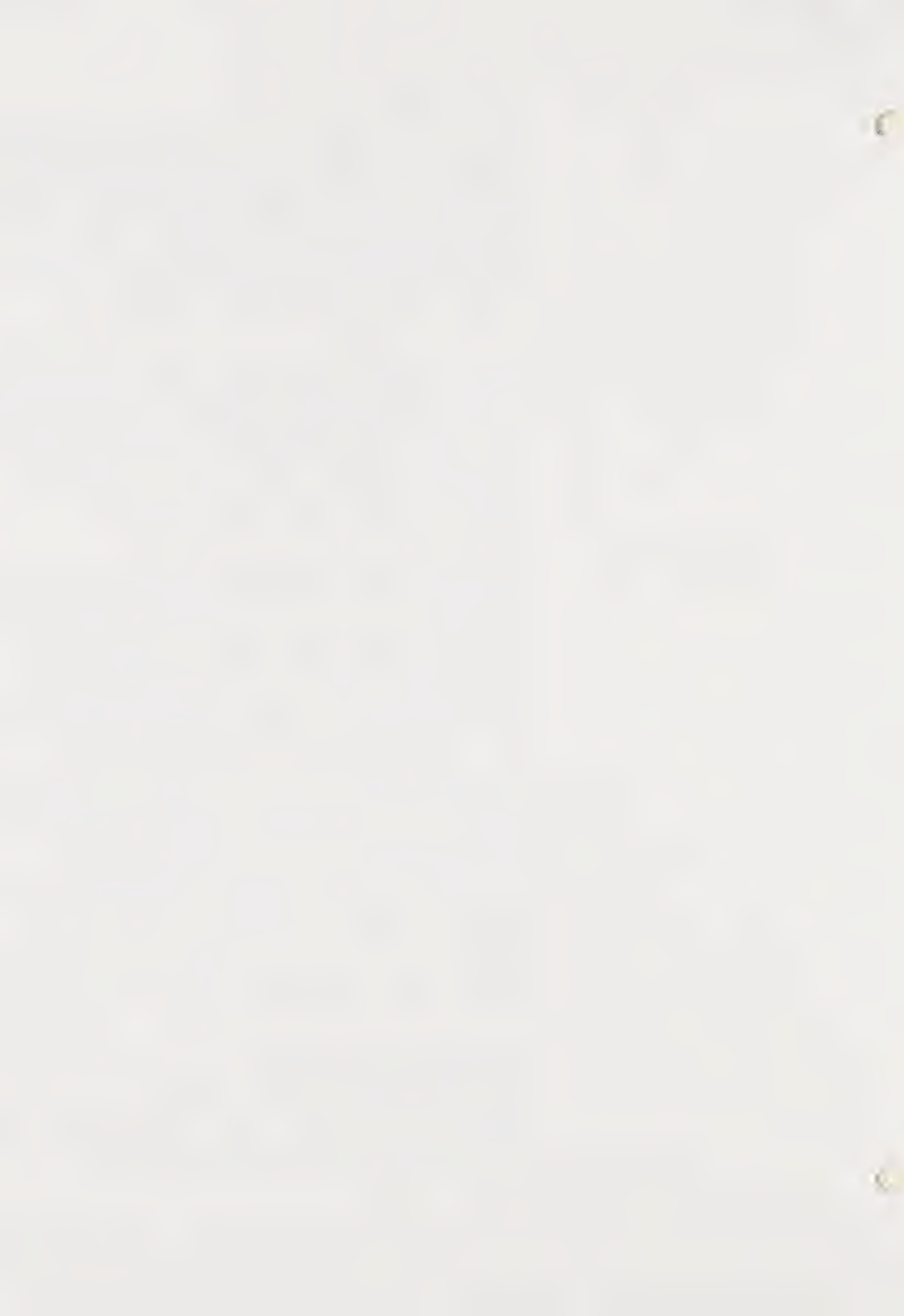
Rail traffic operating in the City also contributes to the ambient noise levels, especially in those areas near Highway 101. Other sources of noise within the City are from stationary sources (that is, non-transportation sources) including a variety of commercial or business activities, sports activities in parks, the schools, construction activities, and a wide range of human activities common to residential neighborhoods.

Characteristics of Sound

Noise levels may be described using a number of methods designed to evaluate the "loudness" of a particular noise. The most commonly used units for measuring the level of sound are the decibel (dB), Equivalent Noise Level (Leq), and the Community Noise Equivalent Level (CNEL). The predominant sound level criteria in use in California at the present time are the Equivalent Noise Level (Leq) and the Community Noise Equivalent Level (CNEL).

A decibel is a unit used for measuring the intensity of sound. Zero on the decibel scale represents the lowest limit of sound which can be heard by humans. The ear drum may rupture at 140 dB. The Leq is the average of the sound level energy for a one-hour period and employs an A-weighted decibel correction which corresponds to the optimal frequency response of the human ear. The CNEL is based upon 24 one-hour Leq measurements. The average noise levels for the late evening and early morning hours (the period between 10:00 PM and 7:00 AM) are weighted 10 decibels.

Intermittent or occasional noise, such as noise associated with stationary noise sources, is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the CNEL scale. To account for intermittent noise, another method to characterize noise is the



Percent Noise Level (L%). The Percent Noise Level is the level exceeded X% of the time during the measurement period.

Noise ordinances are typically specified in terms of the percent noise levels. Ordinances are designed to protect people from non-transportation-related noise sources such as music, machinery and vehicular traffic on private property. Noise ordinances do not apply to motor vehicle noise on public streets or other transportation-related noise sources that are preempted by the State or Federal governments.

Noise and Land Use Compatibility

Noise/land use guidelines have been produced by a number of Federal and State agencies including the Federal Highway Administration, the Environmental Protection Agency, the Department of Housing and Urban Development, the American National Standards Institute, and the State of California. These guidelines, presented in the following paragraphs, are all based upon cumulative noise criteria such as Leq, LDN or CNEL.

Environmental Protection Agency: In March 1974, the EPA published a very important document entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety" (EPA 550/9-74-004). Table __ presents a table of land uses and requisite noise levels. In this table, 55 LDN is described as the requisite level with an adequate margin of safety for areas with outdoor uses, this includes residences, and recreational areas. The EPA "levels document" does not constitute a standard, specification or regulation, but identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels.

Federal Highway Administration (FHWA): The FHWA has adopted and published noise abatement criteria for highway construction projects. The FHWA noise abatement criteria basically establishes an exterior noise goal for residential land uses of 67 Leq and an interior goal for residences of 52 Leq. The noise abatement criteria applies to private yard areas and assumes that typical wood frame homes with windows open provide 10 dB noise reduction (outdoor to indoor) and 20 dB noise reduction with windows closed.

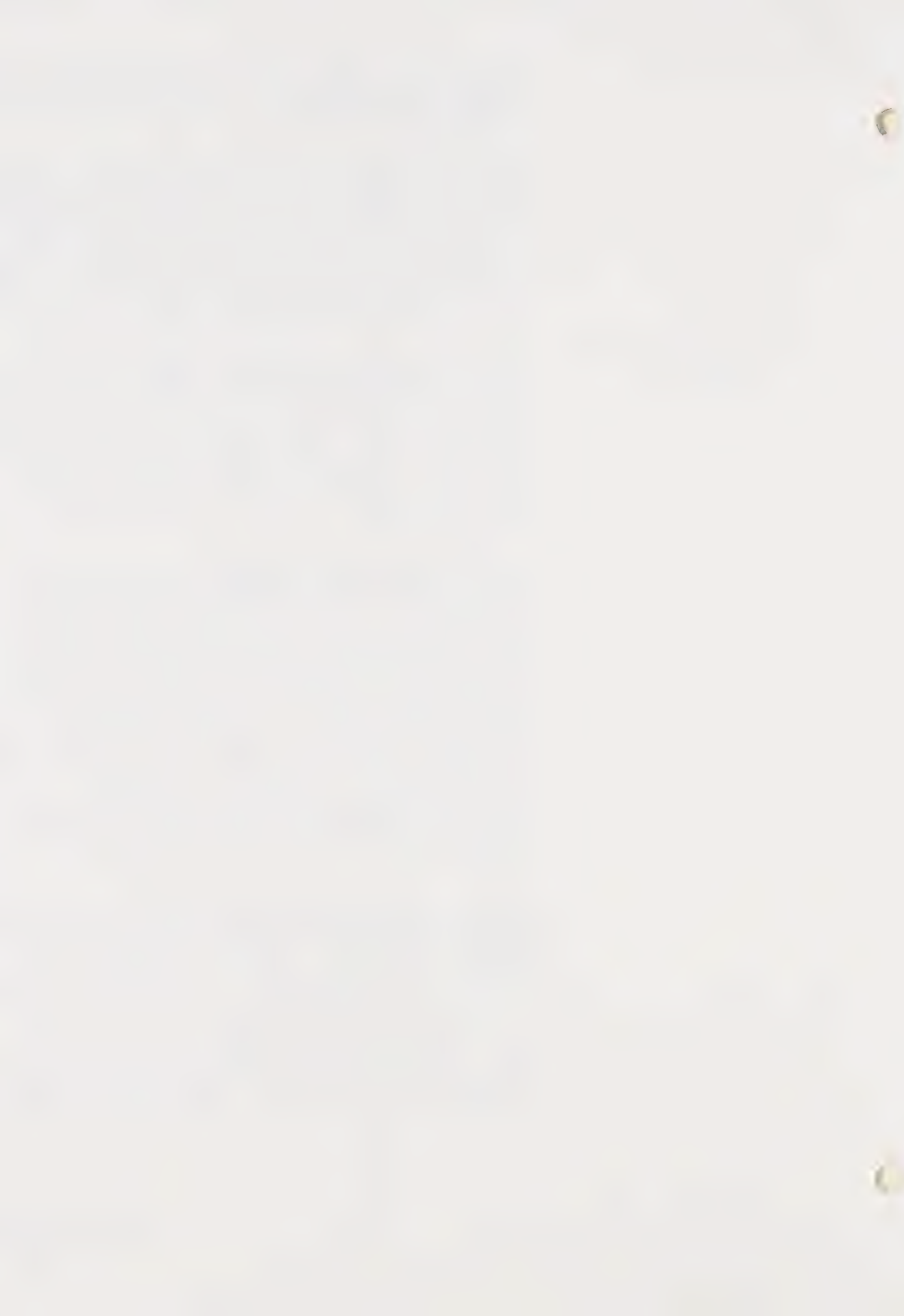


TABLE 1
EPA NOISE GUIDELINES

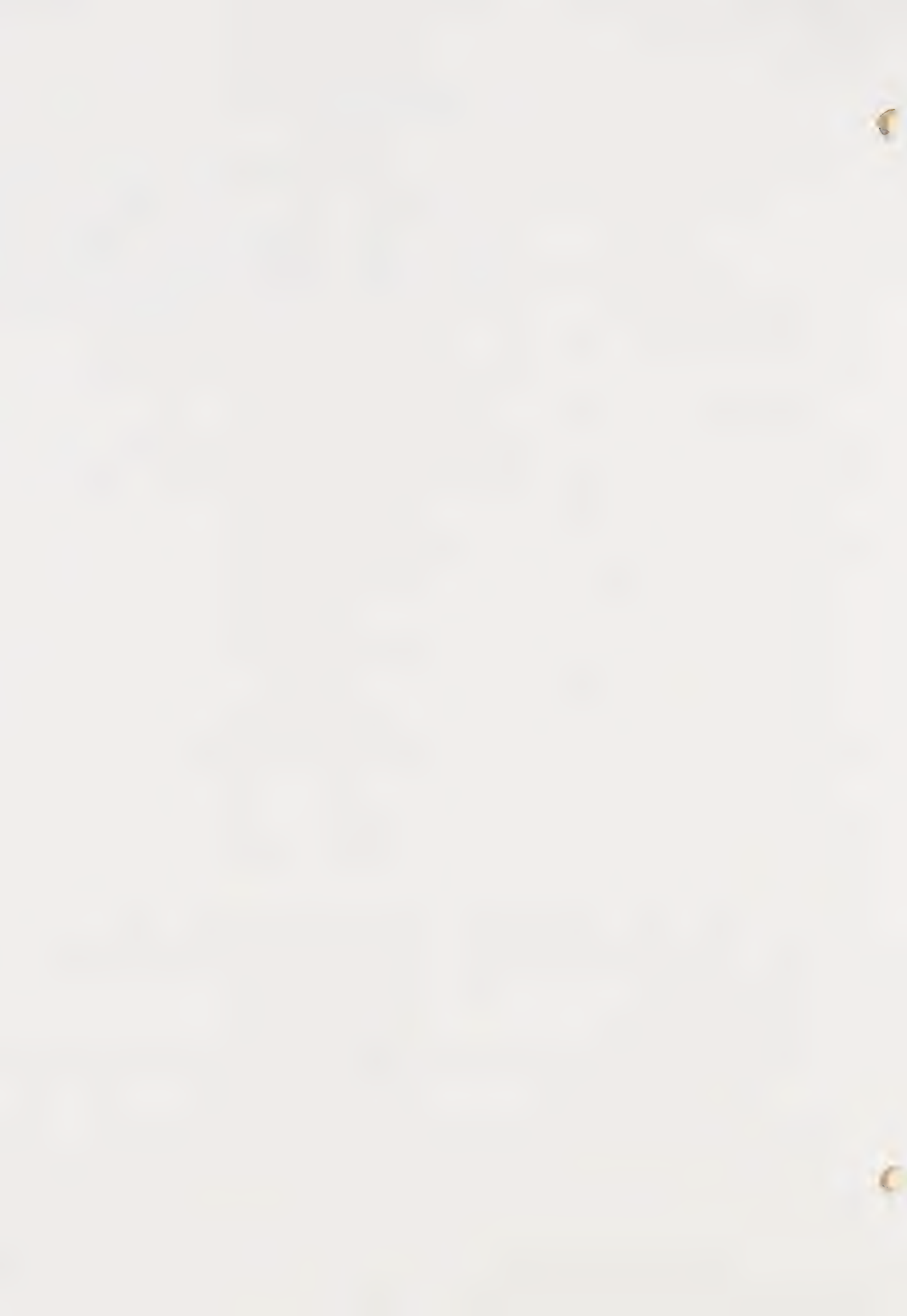
	Measure	Indoor			Outdoor		
		Activity Inter- ference	Hearing Loss Consider- ation	To Protect Against Both Effects(b)	Activity Inter- ference	Hearing Loss Consider- ation	To Protect Against Both Effects(b)
Residential with Out- side Space and Farm Residences	Ldn Leq(24)	45	70	45	55	70	55
Residential with No Outside Space	Ldn Leq(24)	45	70	45			
Commercial	Leq(24)	(a)	70	70(c)	(a)	70	70(c)
Inside Transpor- tation	Leq(24)	(a)	70	(a)			
Industrial	Leq(24)(d)	(a)	70	70(c)	(a)	70	70(c)
Hospitals	Ldn Leq(24)	45	70	45	55	70	55
Educational	Leq(24) Leq(24)(d)	45	70	45	55	70	55
Recreational Areas	Leq(24)	(a)	70	70(c)	(a)	70	70(c)
Farm Land and General Unpopulated Land	Leq(24)				(a)	70	70(c)

Code:

- Since different types of activities appear to be associated with different levels, identification of a maximum level for activity interference may be difficult except in those circumstances where speech communication is a critical activity. (See Figure ___ for noise levels as a function of distance which allow satisfactory communication.)
- Based on lowest level.
- Based only on hearing loss.
- An Leq(8) of 75 dB may be identified in these situations so long as the exposure over the remaining 16 hours per day is low enough to result in a negligible contribution to the 24-hour average, i.e., no greater than an Leq of 60 dB.

Note: Explanation of identified level for hearing loss: The exposure period which results in hearing loss at the identified level is a period of 40 years.

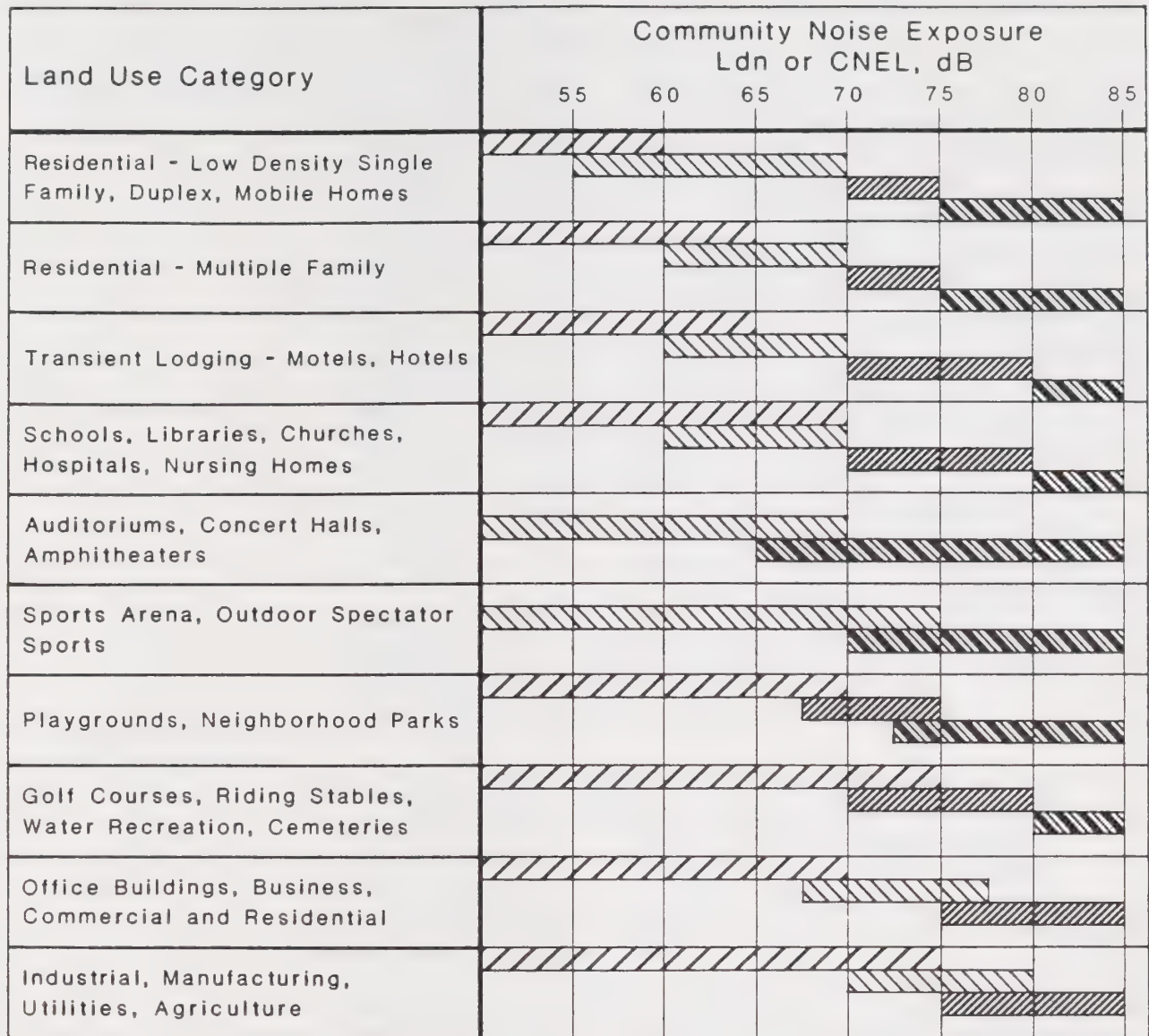
* Refers to energy rather than arithmetic averages.



State of California: The State requires every city and county to adopt a noise element as part of its General Plan which contains a noise/land use compatibility matrix. A recommended (but not mandatory) matrix is presented in the "Guidelines for the Preparation and Content of Noise Elements of the General Plan," (Office of Noise Control, California Department of Health, February 1976). Figure 1 in the Noise Element presents this recommended matrix.

The recently revised State requirements concerning the preparation of noise elements state that they should be prepared according to the guidelines established by the State Department of Health Services, Office of Noise Control. Section 65402(f), as amended, requires that an element contain an analysis and quantification, "to the extent practicable," of existing noise levels for a variety of noise generators. A number of these noise generators identified in the State code, such as airports, are not located within the planning area. Efforts to analyze and quantify noise sources in Encinitas will be directed toward measuring traffic-related noise on the major streets and in areas affected by railroads.

The State Guidelines for Preparation and content of Noise Elements of the General Plan indicates that the Noise Element should present the noise environment in terms of noise contours. Contour maps are contained in the Noise Element itself. The purpose of this technical report is to provide background and supporting information for the City of Encinitas Noise Element.



 Normally Acceptable

Specified Land Use is Satisfactory, Based Upon the Assumption that Any Buildings Involved are of Normal Conventional Construction, Without Any Special Noise Insulation Requirements.

 Conditionally Acceptable

New Construction or Development Should be Undertaken Only After a Detailed Analysis of the Noise Reduction Requirement is Made and Needed Noise Insulation Features Included in the Design. Conventional Construction, but with Closed Windows and Fresh Air Supply Systems or Air Conditioning, Will Normally Suffice.

 Normally Unacceptable

New Construction or Development Should Generally be Discouraged. If New Construction or Development Does Proceed, a Detailed Analysis of the Noise Reduction Requirements Must be Made and Needed Noise Insulation Features Included in the Design.

 Clearly Unacceptable

New Construction or Development Should Generally not be Undertaken.

SOURCE: Guidelines for the Preparation and Content of Noise Elements of the General Plan, California Department of Health, Office of Noise Control, February, 1976.

Figure 1

State of California Noise and Land Use Compatibility Guidelines

EXISTING NOISE ENVIRONMENT

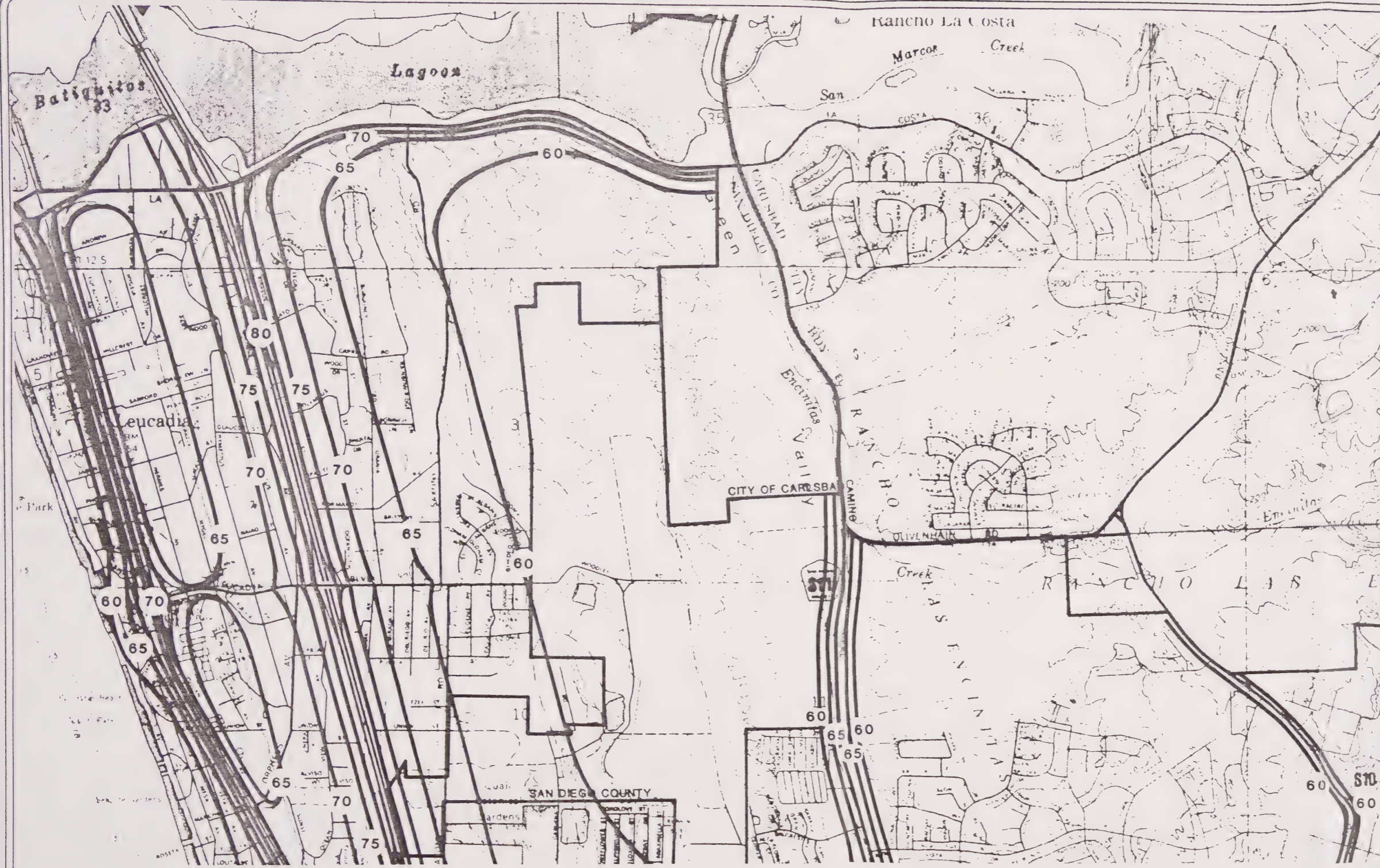
Noise Sources

The major noise sources in the Encinitas planning area are vehicular traffic along Interstate 5 and the local street network, and train traffic from the Atchison-Topeka-Santa Fe (AT&SF) railroad. The AT&SF railroad passes through the Encinitas planning area adjacent to the coast. Amtrak operates 18 passenger trains per day along the railroad, and AT&SF operates four freight trains per day. Two of the Amtrak trains and two of the freight trains pass between the hours of 10 PM and 7 AM, and the remainder of the trains pass during the daytime. Whistles are sounded occasionally within the city limits, primarily to warn people who wander onto the railroad right-of-way that a train is coming. There is an at-grade railroad crossing at Leucadia Boulevard; train whistles are always sounded within 1/4 mile of this crossing. There are no heliports or airports located within the city limits and noise from aircraft overflights is not a significant problem. No major industrial plants are located in the planning area which act as substantial stationary noise sources.

Noise Exposure

Figure 2 depicts the existing 1987 noise levels within the Encinitas planning area. Noise contours are based on the Federal Highway Administration Traffic Noise Prediction Model. Noise contours reflect an existing "worst-case" potential and do not include the effects of shielding from buildings, terrain, or other barriers which tend to reduce noise levels. Noise contours are shown in terms of the day/night average noise level (Ldn); this descriptor is a single-number rating of the average daily noise level at a given location. The Ldn is calculated by averaging the acoustical energy at a given location over a 24-hour period with a 10 decibel (dB) penalty added to noise levels that occur between the hours of 10 PM and 7 AM. The penalty is added to account for increased sensitivity of people exposed to noise during sleeping hours. A detailed discussion of acoustical terminology and fundamental concepts of environmental acoustics is included in the Appendix to the General Plan.

To validate the traffic noise prediction model for the Encinitas planning area, noise measurements were taken at ten roadside locations within the area. Continuous 24-hour measurements were taken at four



—75— L_{dn} Contour

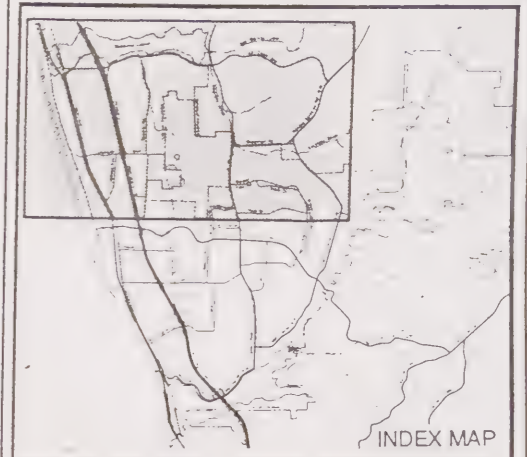
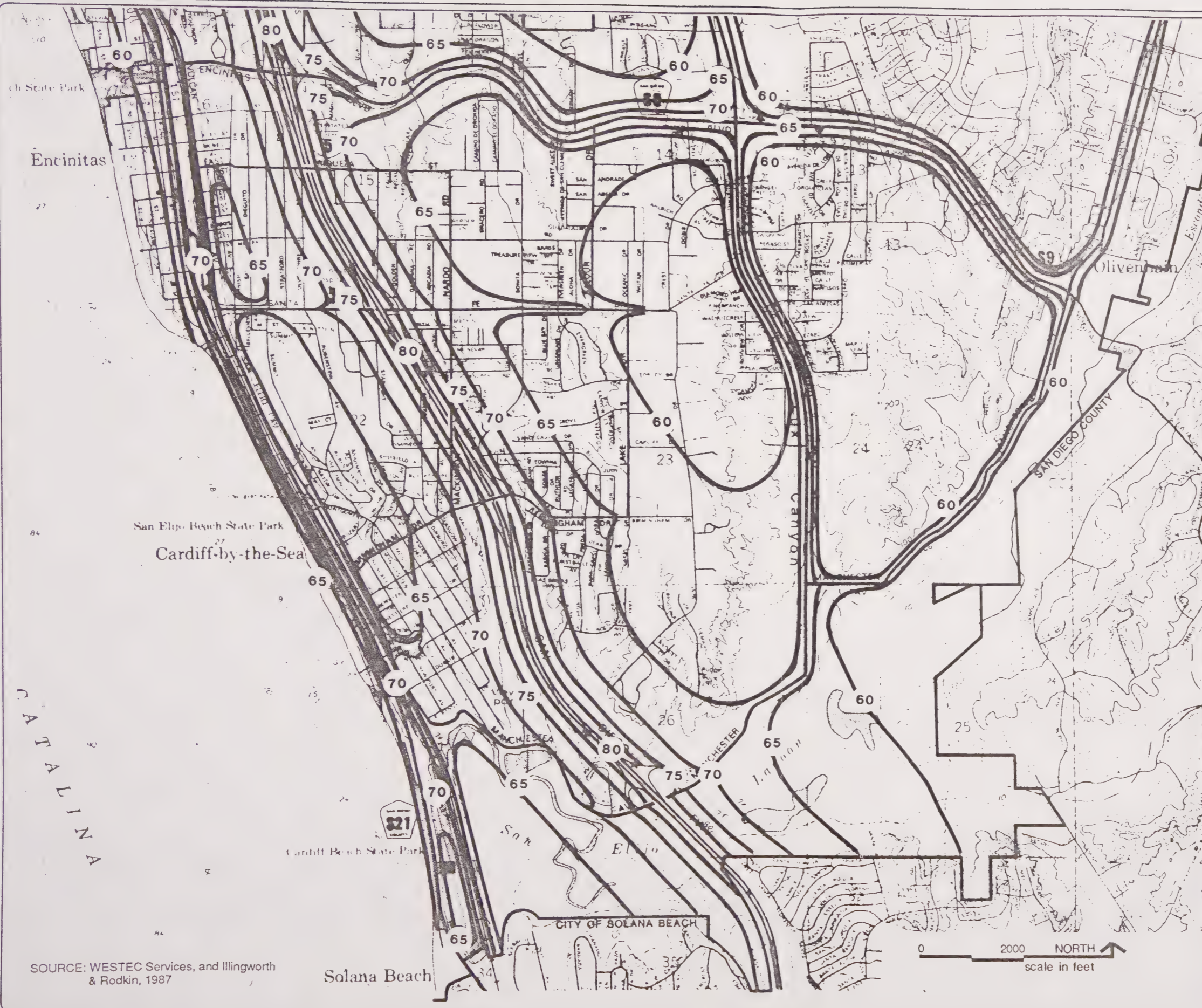


Figure 2 (Map A)
Noise Exposure - Existing
Conditions (1987)

SOURCE: WESTEC Services, and Illingworth & Rodkin, 1987

0 2000 NORTH
scale in feet

Encinitas
General Plan



SOURCE: WESTEC Services, and Illingworth & Rodkin, 1987

—75— L_{dn} Contour

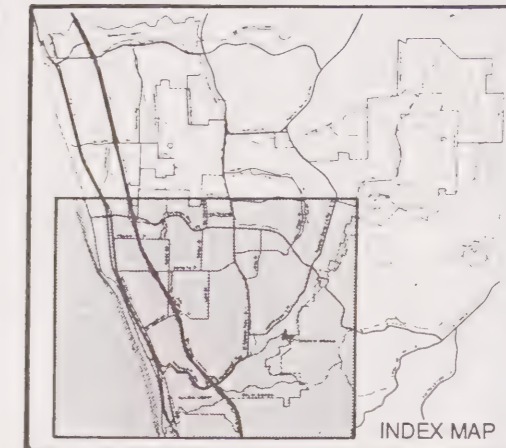


Figure 2 (Map B)
Noise Exposure - Existing
Conditions (1987)

Encinitas
General Plan

locations and two short-term measurements were taken at six additional locations. Measurements were taken along Interstate 5, east-west and north-south arterials with steep gradients and with flat sections, and under a wide variety of speed conditions. The results of the noise survey are summarized in Tables 2 and 3.

Noise levels within the Encinitas planning area are generally above 65 dB(A) Ldn along the major roadways. Traffic along Interstate 5 generates noise levels of approximately 80 dB(A) Ldn adjacent to the highway. Noise levels at about 65 dB(A) are normally considered intrusive, while noise levels of 80 dB(A) are normally considered annoying.

Noise Sensitive Land Uses

Noise sensitive land uses include (but are not limited to) schools, parks, medical facilities and rest homes. These land uses are considered to have a greater sensitivity to noise because it is more likely that noise will interfere with common activities which take place at these areas, including speech, communication, sleep, and relaxation.

In addition, certain wildlife populations could be sensitive to urban noise, especially during breeding and nesting seasons. Although the potential adverse effects of urban noise on adjacent wildlife habitats have not been studied in great detail, certain effects on wildlife resulting from exposure to single-event and long-term noise can be expected to occur. However, in the Encinitas planning area, the primary source of noise is vehicular traffic along transportation routes; noise levels from these sources are much lower than those found to cause problems in laboratory animals or wildlife populations.

TABLE 2
POINT SOURCE MEASUREMENTS:
MAJOR TRAFFIC CORRIDORS

Hour	Interstate 5(1) (Orpheus Ave.)	A-Weighted Noise Levels, dB (Leq.)			
		El Camino Real(2) (s. of Santa Fe	Vulcan Ave.(3) (betwn. Hillcrest Dr. & Ashbury St.	Encinitas Blvd.(4) (City offices Parking Lot)	
1 pm	7/23 73	7/22 75	7/22 65	66	
2 pm	72	75	65	67	
3 pm	73	75	66	67	
4 pm	73	75	65	69	
5 pm	73	75	65	71	
6 pm	73	75	65	67	
7 pm	71	75	64	67	
8 pm	71	75	63	65	
9 pm	70	73	62	62	
10 pm	69	73	64	65	
11 pm	67	73		71	
12 am	7/24 65	7/23 71	7/23 57	72	
1 am	63	70	56	53	
2 am	61	69	51	55	
3 am	60	70	51	51	
4 am	62	71	51	51	
5 am	65	74	60	56	
6 am	71	77	65	66	
7 am	72	77	67	67	
8 am	73	77	69	65	
9 am	73	76	66	64	
10 am	73	76	65	69	
11 am	73	-	65	69	
12 pm	73	-	67	66	
	Ldn=	Ldn=	Ldn=	Ldn=	

Notes:

(1) Measurement distance = approximately 110' to near lane

(2) Measurement distance = approximately 67' to near lane

(3) Measurement distance = approximately 35' from centerline and 100' from AT&SF Railroad.

(4) Measurement distance = approximately 65 feet from centerline of near lane.

Source: Illingworth and Rodkin, 1987.

TABLE 3
SUMMARY OF SHORT-TERM MEASUREMENTS

Date	Time	L _{eq} (1)	L ₀₁ **	L ₁₀	L ₅₀	L ₉₀	# of Cars	# of Trucks	# of Buses
Site 1: Santa Fe Drive (between Nardo Rd. and Bonita Dr.) 50' from centerline of near lane.									
7/23/87	8:45-9:00am	66	73	69	65	57	240	1	1
7/24/87	8:18-8:33am	65	73	68	63	57	181	1	1
Site 2: Birmingham Dr. (between Lake and Crest Drives) 50' from centerline of near lane.									
7/23/87	9:20-9:35am	56	67	58	49	47	44	0	0
7/24/87	9:07-9:22am	58	69	63	51	45	41	1	0
Site 3: El Camino Real (between Via Modena and Via Montoro) 50' from centerline of near lane.									
7/23/87	10:08-10:23am	66	75	69	65	57	667	13	2
7/24/87	9:39-9:54am	65	73	69	63	57	631	4	1
Site 4: La Costa Ave. (between Saxony Dr. and Frontage Rd.) 50' from centerline of near lane.									
7/23/87	11:24-11:39am	72	81	75	71	63	391	21	0
7/24/87	10:26-10:41am	69	77	73	69	61	344	5	0
Site 5: Rancho Santa Fe Rd. (between Encinitas Blvd. and D St.) 50' from centerline of near lane.									
7/23/87	1:09-1:24pm	65	77	68	61	51	177	8	0
7/24/87	11:37-11:52am	64	73	67	59	49	177	5	0
Site 6: Saxony Rd. (between Leucadia Blvd. and Puebla St.) 50' from centerline of near lane.									
7/23/87	2:04-2:19pm	60	69	63	57	55	80	5	0
7/24/87	11:04-11:19am	59	69	63	55	53	71	2	1
Notes: (1) L _{eq} = The average A-weighted noise level during the measurement period. (2) L ₀₁ , L ₁₀ , L ₅₀ , L ₉₀ = The A-weighted noise levels that are exceeded during the measurement period, 01%, 10%, 50%, and 90% of the time, respectively.									

Source: Illingworth and Rodkin, 1987

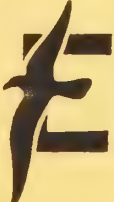
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CITY OF ENCINITAS GENERAL PLAN

December 1987

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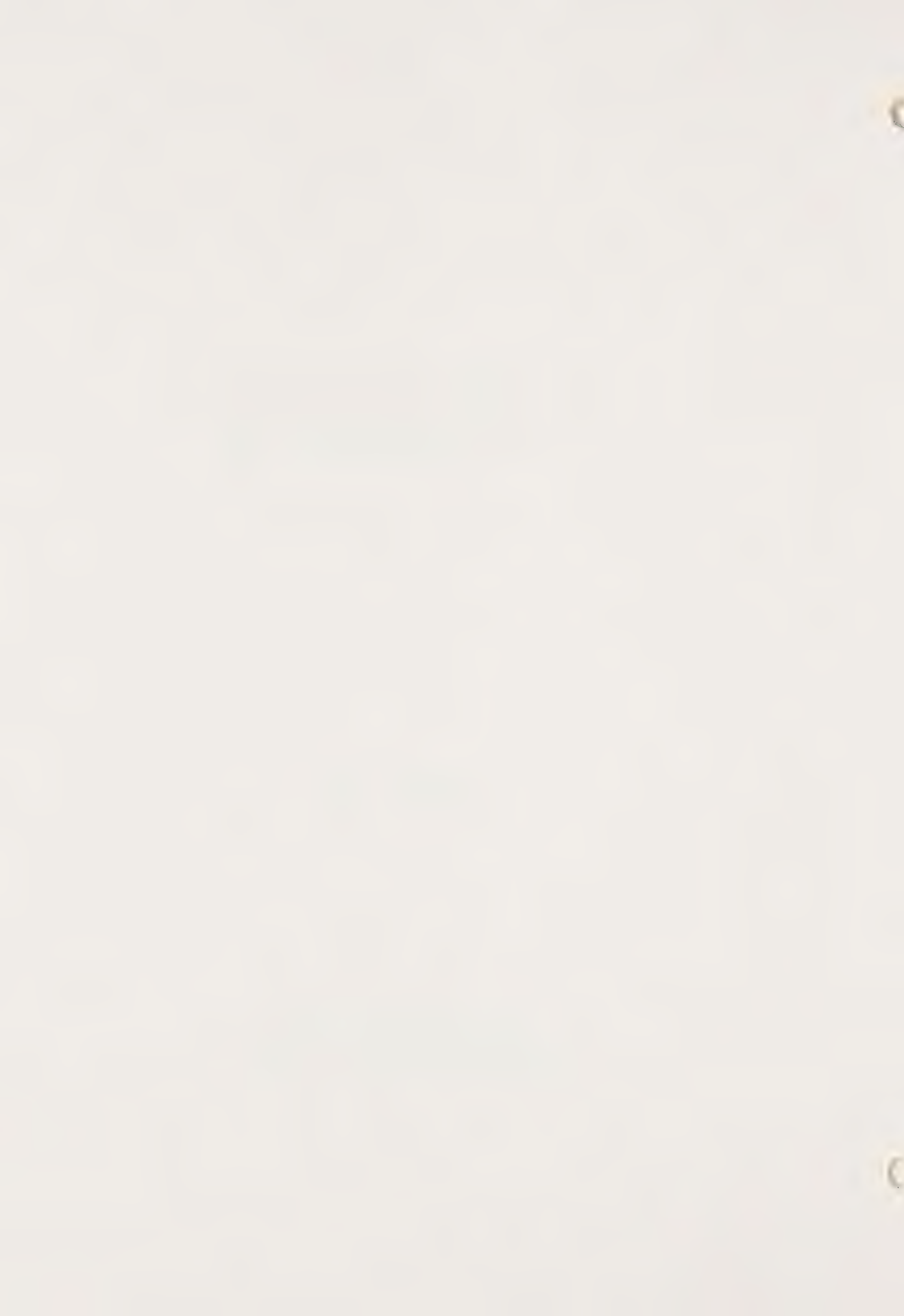


TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	
Purpose of this Report	PSTR-1
Issues and Opportunities	PSTR-1
EMERGENCY SERVICES	
Fire Protection	PSTR-3
Law Enforcement	PSTR-6
Hospitals	PSTR-6
DESCRIPTION OF ENVIRONMENTAL HAZARDS	
Seismic Hazards	PSTR-8
Dam Failure	PSTR-13
Flooding	PSTR-13
Cliff Erosion	PSTR-15
Wildfires	PSTR-19
Nuclear Accident Hazard	PSTR-19
Hazardous Materials/Chemical Spills	PSTR-20
HAZARD AND RISK ASSESSMENT	
Level of Risk	PSTR-22
Scope of Risk	PSTR-22
Emergency Response	PSTR-22
Local/City Scope of Risk	PSTR-23
Regional Scope of Risk	PSTR-25

LIST OF TABLES

	<u>Page</u>
Table 1: Encinitas Fire Protection District Staff and Equipment	PSTR-3
Table 2: Rancho Santa Fe Fire Protection District Staff and Equipment	PSTR-5
Table 3: Local/City Environmental Hazard Assessment	PSTR-25
Table 4: Regional Environmental Hazard Assessment	PSTR-26

LIST OF FIGURES

Figure 1: Existing Emergency Services and Facilities	PSTR-7
Figure 2: Regional Seismic Hazards	PSTR-9
Figure 3: Local Faults and Epicenters	PSTR-11
Figure 4: Flood-Prone Areas in the Vicinity of the Encinitas Planning Area	PSTR-14

INTRODUCTION

Purpose of this Report

A number of environmental hazards have the potential to threaten public safety of residents. Natural events, such as earthquakes, flooding, and landslides, could result in human injury and property damage. In addition, man-made hazards (eg., chemical spills) pose a threat to human health and the environment. The identification of these potential environmental hazards and appropriate preparation may help the city to reduce the affects of flooding, seismic activity, and other types of upset. The provision of emergency services is one of the approaches used to protect the residents and property within a city.

This technical report identifies environmental hazards that may affect the City of Encinitas. Also, the report discusses existing emergency services and the agencies which provide these services to the City.

Issues and Opportunities

There are a number of issues that relate to the safety and welfare of the residents in the City of Encinitas:

- ° In all likelihood, an earthquake will occur in the next 30 to 50 years which will have a major impact on the City of Encinitas as well as the entire Southern California region.
- ° The Encinitas Planning Area has experienced major flooding in recent history which may be expected to occur again during periods of excessive rainfall. Flooding problems will also be exacerbated by new development which has occurred throughout the City. The runoff and drainage have been substantially altered by new residential development.
- ° Structural failure and erosion of the coastal bluffs are major concerns in the coastal communities. Continued bluff failure should be expected as a result of the natural geologic processes though the rate of bluff erosion has also been affected by nearby development. Mitigation measures that might retard or prevent bluff failure are possible though these measures are generally quite expensive. In addition, such measures might not be desirable from an aesthetic or environmental standpoint.

- ° The wildfire hazard is substantial in the undeveloped wilderness areas in the eastern half of the City. The last major fire occurred over 40 years ago, and the vegetative fuel-load in the local chaparral increases the risk of a major fire.

There are a number of factors that improve the City's ability to respond in the event of an emergency:

- ° The Insurance Services Organization (ISO) rating of the portions of the Planning Area served by the two local fire districts is high. The ISO rating is used by insurance companies to determine the appropriate fire insurance rates for a community. The ISO ratings for the Encinitas Fire District and the Rancho Santa Fe Protection District are 3 and 4 respectively.
- ° While the City of Encinitas contracts with San Diego County for law enforcement services, the Sheriff's Department maintains a station at a centralized location within the City.
- ° Most of the structures in the City are well maintained, thus reducing the risk of structural fires.
- ° There are no major industries or producers of hazardous materials that present significant risks to the community. A number of smaller businesses do utilize hazardous and toxic material.
- ° Access in some areas of the City is provided by a single road. Evacuation of residents or the movement of emergency equipment and crews would be constrained if the road were closed.
- ° The numerous agricultural operations located in the City utilize chemicals that would adversely affect the local environment in the event of a spill or fire.

EMERGENCY SERVICES

Fire Protection

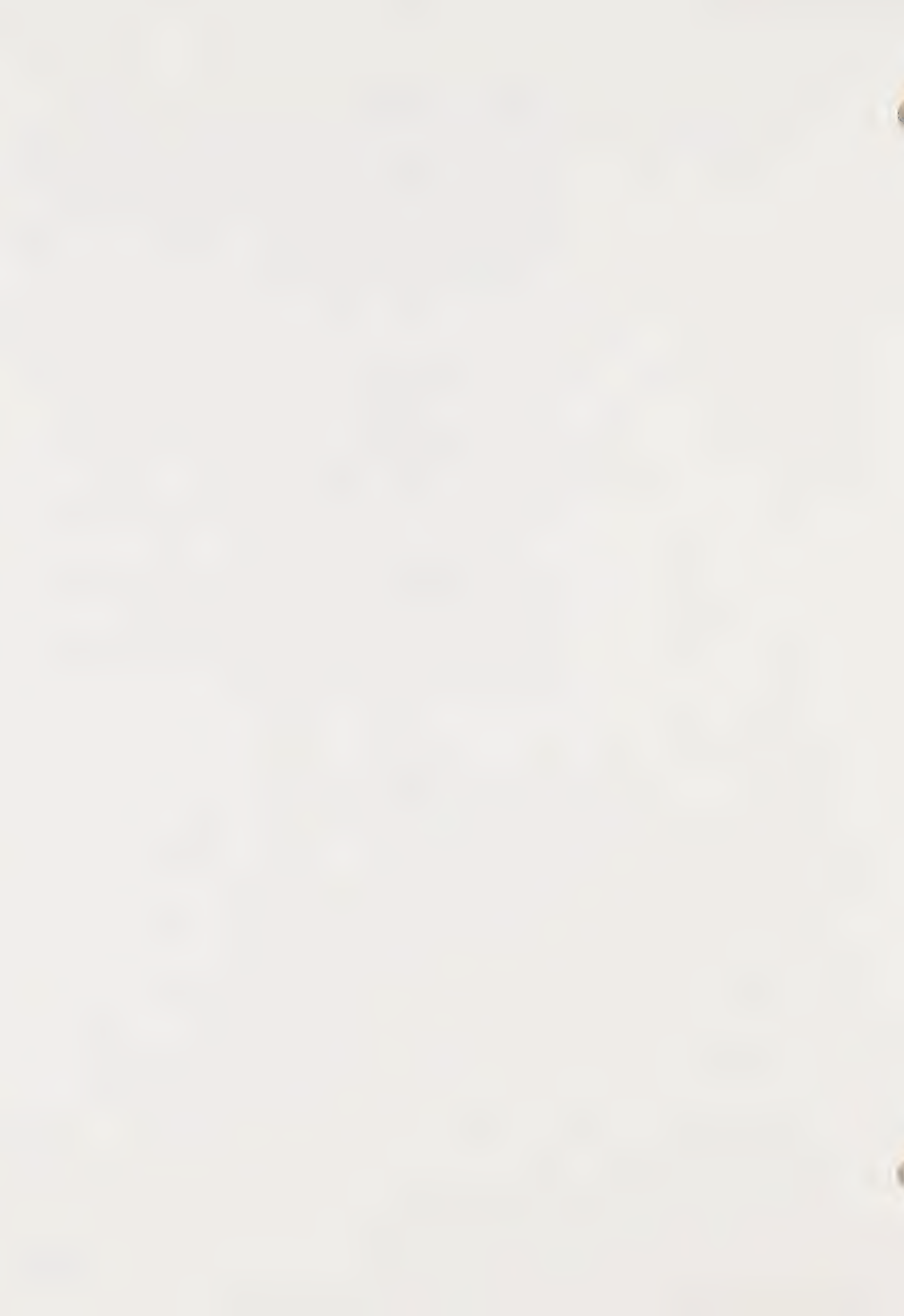
The City of Encinitas receives its fire protection service from two fire districts: the Encinitas Fire Protection District (EFPD) and the Rancho Santa Fe Fire District (RSFFD). EFPD is subsidiary to the City of Encinitas and it is likely that the district will be absorbed by the City in the future. RSFFD is an independent district, but its service responsibilities within the City may ultimately be transferred to the EFPD and the City in the future.

The Encinitas Fire Protection District has a total of 54 employees and four fire stations (Table 1). The site for a fifth station has recently been acquired. The site is located within the right-of-way proposed for SA 680 highway. No paramedics are employed, but all firefighters have received emergency medical training. Private paramedics are presently provided by Southwest Ambulance and are assigned to Station No. 2.

A major objective of the EFPD is to have a five minute response time for most of the service area. this goal is close to being achieved with approximately 90% of all responses being within a 5-minute response. A notable exception involved calls to the Olivenhain community which had an average response time of 8 minutes.

Table 1
ENCINITAS FIRE PROTECTION DISTRICT STAFF
AND EQUIPMENT

Station	Minimum Staffing Level	Fire Fighting Equipment
No. 1 (2nd St.)	4 Fire Fighters	(1) 75-foot Aerial Ladder Truck (1) 1500 gpm Pumper (1) Ambulance
No. 2 MacKinnon	3 Fire Fighters	(1) 1250 gpm Pumper (1) 1000 gpm Reserve Pumper
No. 3 (Orpheus)	3 Fire Fighters	(1) 1250 gpm Pumper (1) 500 gpm Reserve Pumper
No. 4 (El Camino Real)	3 Fire Fighters	(1) 1500 gpm Pumper



EFPD has a reciprocal automatic aid agreement with the surrounding districts in Solana Beach, Del Mar, Rancho Santa Fe, Carlsbad, and San Marcos. The district also has a mutual aid agreement with the County of San Diego to assist any other districts located in the County.

The most prevalent types of dispatches to which the district responds are requests for medical aid, traffic accidents, and brush fires during the dry season. The most significant issues which concern the district involve the use, transport, and disposal of hazardous materials in transport through the city, the potential hazards associated with the natural gas distribution line located in the major north-south SDG&E easement, and pesticide storage in agricultural areas.

The district presently has an Insurance Service Office (ISO) rating of 3. This rating is used by insurance companies to determine fire insurance rates where cities are rated on a scale of one to ten with one being the highest rating. The following standards were utilized to determine the ISO rating for the areas served by the EFPD:

- Automatic fire extinguishing system for high-rise buildings;
- No storage of flammable liquids in outside above-ground tanks;
- Limitation of areas for storage of combustible liquids in outside above-ground tanks;
- Limits on storage of explosives/blasting agents;
- Minimum flow for fire protection water and minimum hydrant spacing;
- Stringent access for buildings; and
- Hazardous material disclosure/handling.

The Rancho Santa Fe District has four stations, two of which serve the City of Encinitas (Figure 1). Table 2 describes the minimum manning and fire fighting equipment at the two stations serving Encinitas.

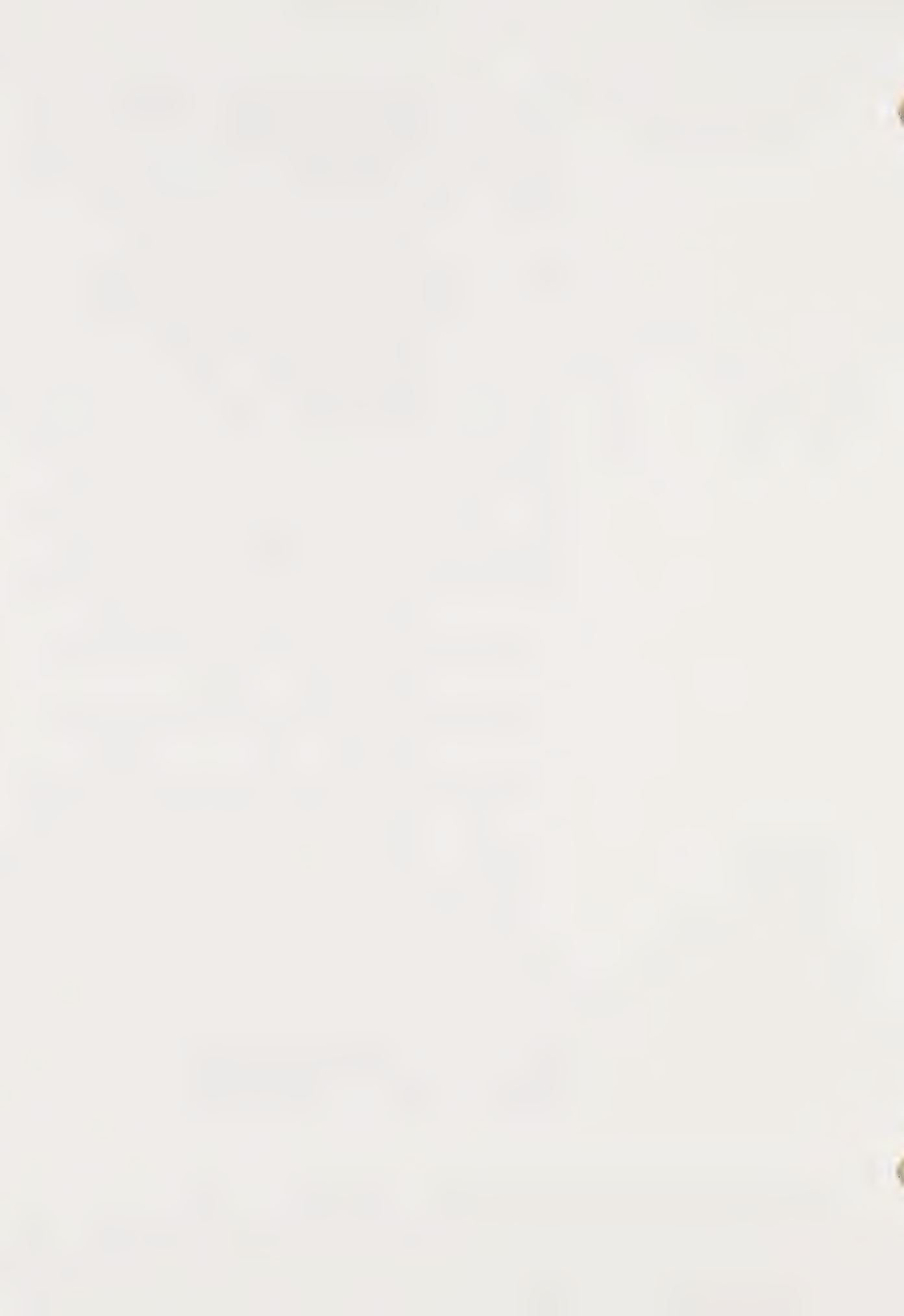
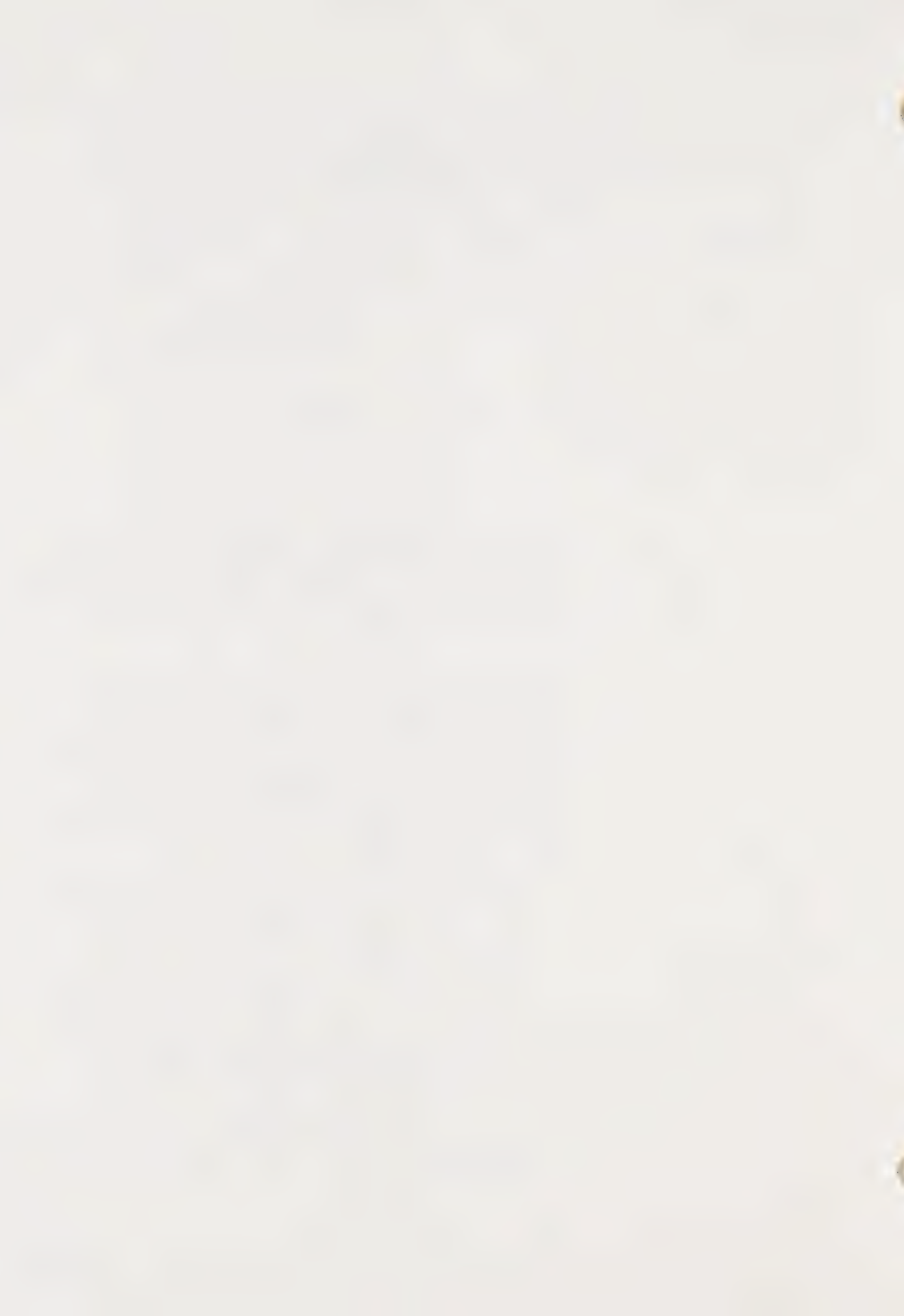


TABLE 2 RANCHO SANTA FE FIRE PROTECTION DISTRICT STAFF AND EQUIPMENT		
Station	Minimum Staffing Level	Fire Fighting Equipment
No. 1 (El Fuego)	4 Fire Fighters	(1) Engine (1) Ambulance (1) Ambulance (1) 1500 gpm Pumper (1) Brush Rig and Reserve Apparatus
No. 2 (Village Park)	3 Fire Fighters	(1) Engine (1) Ambulance

RSFPD has a mutual aid agreement with other districts in the cities of Carlsbad, Encinitas, Solana Beach, Del Mar, San Diego, San Marcos, and Escondido, and an automatic aid agreement with the County of San Diego to assist other districts located in the County.

The most prevalent types of calls to which the RSFPD district responds are requests for medical aid, vehicular problems and traffic accidents, and investigations. The most significant issue which concerns the district is that of brush fires during the dry season. The district presently has an ISO rating of 4. The following fire standards were utilized to determine the ISO rating of the areas served by the RSFPD:

- Minimum fire hydrant spacing, water pressure for fire flow, and main line size requirements;
- Minimum setbacks of structures from brush;
- Class A roofing requirement in wildland areas;
- Automatic sprinkler systems of fire-proof exterior materials for construction;
- Weed abatement program; and
- Educational programs for fire prevention and protection.



Law Enforcement

Law enforcement in the City is provided by the San Diego County Sheriff's Department. A single Sheriff's Department substation, located on North El Camino Real, is manned by 72 sworn officers and has a total of 85 employees.

The average response time for emergency calls is nine minutes. The Sheriff's Department has adopted a goal for 7-minute response times for emergency calls (priority) and a 15-minute response time for non-emergency calls (non-priority).

Residential burglaries, auto thefts, and non-residential burglaries are the major enforcement problems within the City. According to the Sheriff's Department, crimes do not seem to be concentrated in any single neighborhood or reporting district. A major proportion of staff time is devoted to traffic control and accident investigation.

A crime prevention program, known as Neighborhood Watch, began in the Encinitas area in 1978 and the Sheriff's Department knows of approximately 350 neighborhood groups that have operated under that program since it began. Many of these groups are no longer active or become active only after a crime occurs within their neighborhood.

Hospitals

The Scripps Memorial Hospital and the San Luis Rey Hospital are the only hospitals located in the City of Encinitas.

Scripps Memorial Hospital is a non-profit community hospital which provides emergency, as well as other medical services. Currently, the hospital has 93 patient beds, but a planned expansion scheduled for completion in early 1989 will bring the total number of beds to 150. Medical emergencies are transported to Scripps Memorial by private ambulance services under contract with the hospital. San Luis Rey Hospital is currently privately owned though the facility may be acquired by the County in the near future. At the present time, there are no designated trauma centers located in the City. Life threatening trauma cases are flown by helicopter to Scripps La Jolla. In the event of a major disaster, all hospitals in the City and surrounding region will follow certain procedures to respond to demands for medical services that may arise.



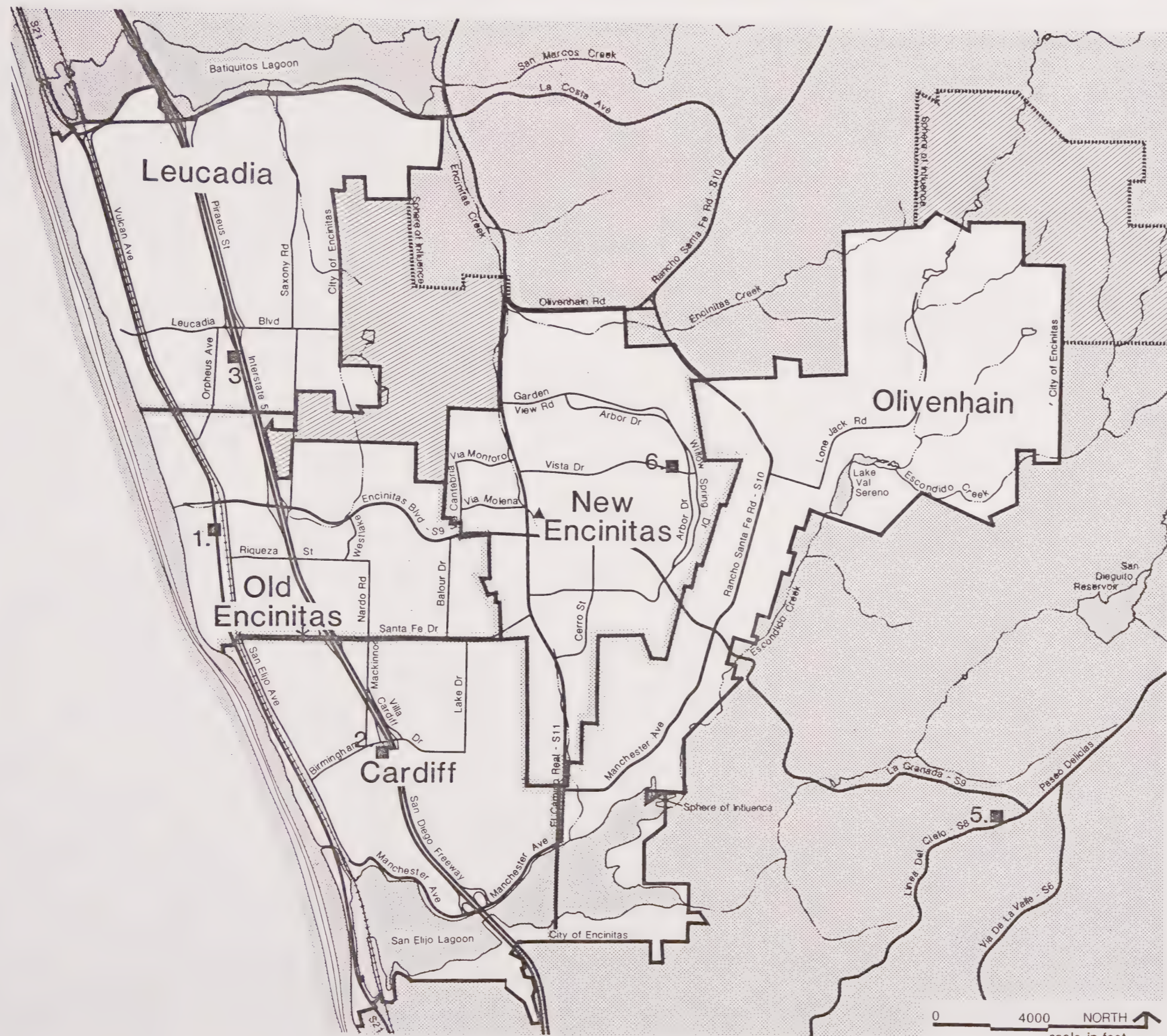
DESCRIPTION OF ENVIRONMENTAL HAZARDS

Natural hazards exist in every area, though actual risk varies regionally and among localities. The City of Encinitas has potential natural hazards which are common to the region and other hazards which are unique to the City's coastal location. The Southern California region is a seismically active area (Figure 2). As part of this region, the City of Encinitas is exposed to earthquakes and the hazards associated with earth tremors. Ground shaking, ground rupture, liquefaction, and the water related events, tsunami and seiches, are some of these associated hazards. A local hazard involves the movement, or slumping, of the coastal bluffs. The above mentioned natural hazards, as well as other hazards, are described in detail in the following section.

Seismic Hazards

Some important terms are used in the discussion of potential seismic hazards. These terms are defined below:

- ° An "active fault" is one which has moved in historic time, or exhibits displacement during the Holocene, i.e., the last 11,000 years.
- ° A "potentially active fault" is one which exhibits displacement from the Pleistocene (11,000 to 2.3 million years ago), but which lacks evidence of movement during the Holocene.
- ° The "maximum credible earthquake" is the largest magnitude event that a particular fault appears capable of producing. While it is highly unlikely, it is still a believable event which could occur within the present geologic framework and present geologic time period.
- ° The "maximum probable earthquake" is the maximum event likely to occur with a fairly high probability. A recurrence interval for the earthquake can be predicted, and the maximum probable earthquake is often expressed in terms of likelihood of occurring within a 100-year interval.



- Fire Station
- Encinitas Fire Protection District
- No.1 2nd Street
 - No.2 Mackinnon
 - No.3 Orpheus
 - No.4 El Comino Real
- Rancho Santa Fe Fire Protection District
- No.1 El Fuego
 - No.2 Village Park Hospital
- ▲ Police Station
- * Hospital
- Scripps Memorial Hospital Encinitas

Figure 1
Existing Emergency Services
and Facilities

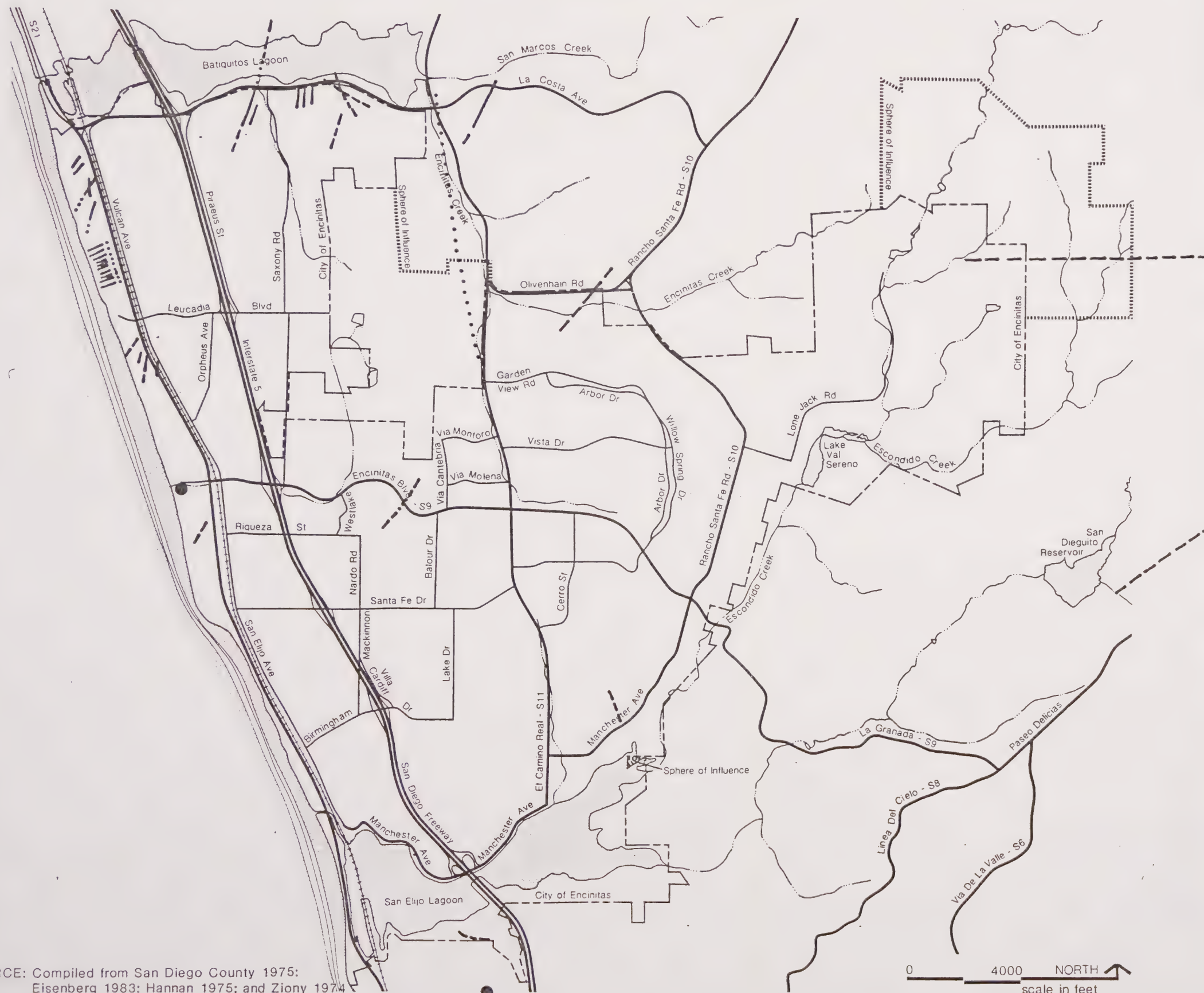
Encinitas
General Plan



SOURCE: Jennings, 1975

Figure 2
Regional Seismic Hazard

Encinitas
General Plan



SOURCE: Compiled from San Diego County 1975;
Eisenberg 1983; Hannan 1975; and Ziony 1974



-  Fault, Dashed Where Inferred,
Dotted Where Concealed
-  Epicenter (Magnitude Between 2.0 and 2.9
Richter Scale; Data Taken 1934-1961)

Figure 3
Local Faults and Epicenters

Encinitas
General Plan

water-laden, non-cohesive soils to form a quicksand-like soil condition below the ground surface. Liquefaction is a major risk in areas with sandy, moisture-laden soils and in areas with high water tables. Structural damage may follow as building foundations lose ground support. Due to geologic conditions in the Encinitas area, the potential for the occurrences of settlement and liquefaction is low in most areas of the City.

Tsunami and seiches are both water-related hazards. Tsunami are long sea waves generated by submarine earthquakes, landslides or volcanos, and they travel across the ocean at high velocities. As they approach the shore, the tsunami waves slow and may be transformed into a much higher and potentially devastating wave. The topography of the ocean floor and the direction of offshore faulting contributes to a low probability of tsunami along the coast of San Diego County. Seiches are seismically induced waves occurring on large confined bodies of water, such as lakes, dams, reservoirs, or confined bays. The probability of seiches occurring in Encinitas also is considered low.

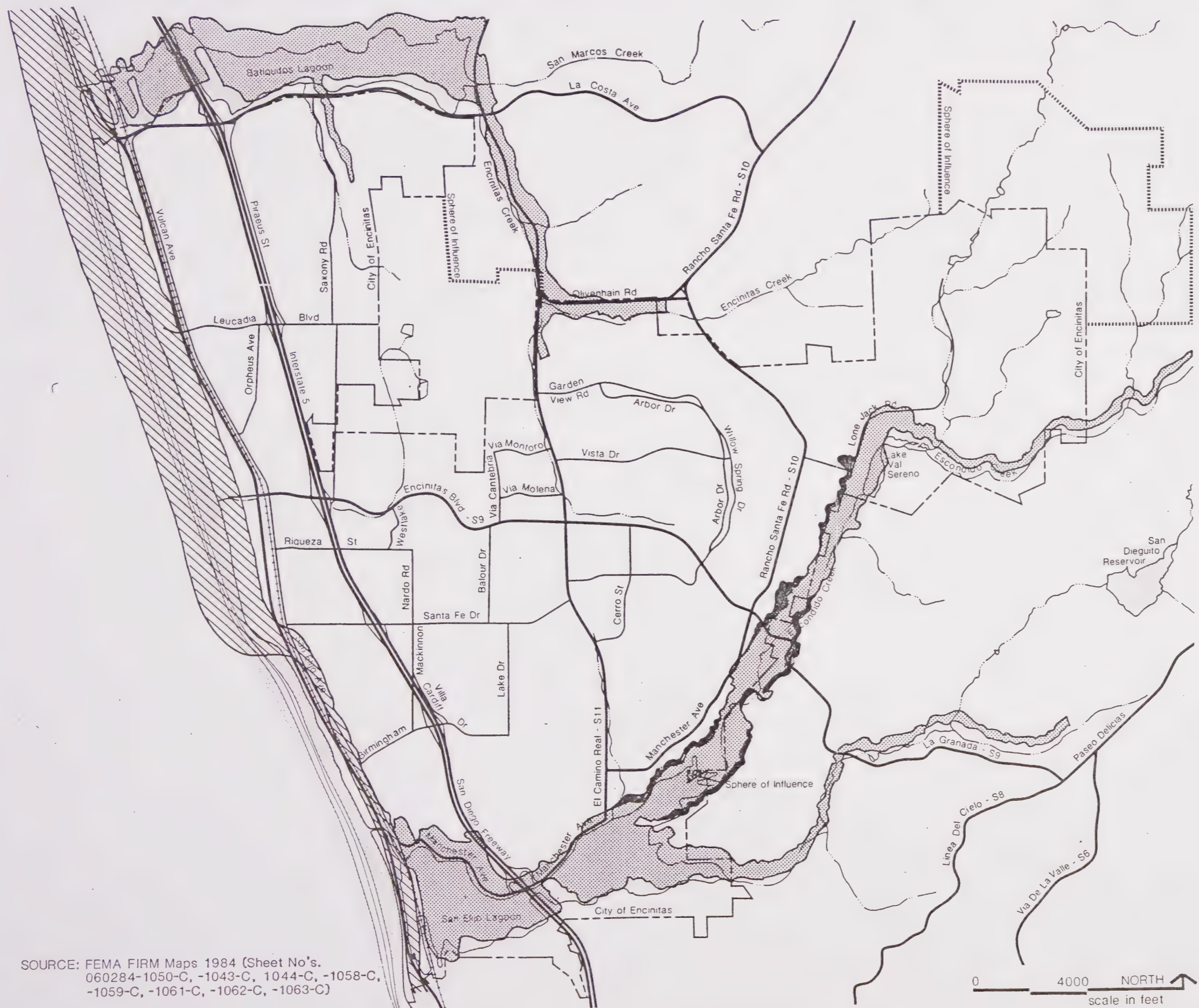
Dam Failure




Several dams are located in the vicinity of the Planning Area which might affect the City in the event of dam failure. Lake Val Sereno was formed by the construction of an earthen dam on Escondido Creek. Lake San Marcos was formed by the construction of a concrete arch dam on San Marcos Creek. The resulting reservoir has a total capacity of 480 acre feet. Finally, Lake Wohlford, created by an earthen dam with a concrete core on Escondido Creek, has a total capacity of 7,500 acre feet.

The risk of dam failure from Lake Val Sereno and Lake San Marcos dams is not considered to be significant. A failure of the Lake Wohlford dam could result in significant damage downstream due to the amount of water stored in the lake. The probability of failure from this dam is considered to be low.

Flooding

Flooding is a natural attribute of any river and occurs when a temporary rise in stream flow results in the overtopping of stream banks and inundation of areas adjacent to the stream channel. Factors affecting the size and frequency of floods include the amount, intensity, and distribution of



-  100-Year Flood Zone: Zone A
-  500-Year Flood Zone: Zone B
-  100-Year Coastal Flood: Zone V

Note: Zone C (areas subject to minimal flooding) encompasses the majority of the Encinitas Planning Area.

Figure 4
Flood-Prone Areas
in the Vicinity of the
Encinitas Planning Area

SOURCE: FEMA FIRM Maps 1984 (Sheet No's.
060284-1050-C, -1043-C, 1044-C, -1058-C,
-1059-C, -1061-C, -1062-C, -1063-C)

Encinitas
General Plan

rainfall; soil moisture conditions prior to storms; frequency of wildfires and other events which affect vegetative ground cover within a watershed; and stream channel conditions. Flooding can also occur along the coast due to wave action caused by storms offshore.

Large floods along any watercourse are inevitable, though the potential for flooding in a semi-arid environment such as the San Diego County area is increased due to the variation and unpredictability of the amount and intensity of rainfall. In addition, increased development has affected local hydrology by altering runoff and drainage patterns.

The City of Encinitas has experienced several major floods in recent years. The most recent flood episode occurred during the months of January and February in 1980. Heavy rainfall during this period caused many reservoirs to reach storage capacity and local streams to reach maximum levels.

The City is a participant in the National Flood Insurance Administration program through the Federal Emergency Management Agency (FEMA). This agency provides federal flood insurance subsidies and federally financed loans for property owners in flood-prone areas. The U.S. Department of Housing and Urban Development (HUD), through the Flood Insurance Program, has identified areas in Encinitas which are at risk due to periodic flooding (Figure 4). These areas include Batiquitos Lagoon at the northern edge of the City, Encinitas Creek which feeds the Batiquitos Lagoon, San Elijo Lagoon at the southern edge of Encinitas, and Escondido Creek which empties into it. In addition, several intermittent streams which terminate in the lagoons are identified as potential flood areas. The entire coastline of Encinitas also is listed as "Zone V" by HUD. Zone V refers to those areas subject to 100-year coastal flood due to wave action.

Cliff Erosion

About two-thirds of the San Diego County coast consists of cliffs, while the other one-third is embayed or backed by coastal plains. The cliffs generally range from 25 to 100 feet high, although a short section of cliffs over 300 feet high exists in the Torrey Pines area. Cliffs along the Encinitas coast are from 90 to 110 feet in height.

These cliffs generally evolve through three stages:

Active: Cliffs consisting of bedrock exposed by their continuous retreat caused by both marine and subsurface agents and processes;

Inactive: Cliffs that are mantled, especially along their bases, by a cover of talus (rock debris at base of an eroded slope) having slopes from 25 degrees to 30 degrees and commonly supporting land vegetation, including trees; and

Former: Cliffs that have been removed from the influences of marine processes so that subsurface erosion rounds the crests and provides material for stream deposition beyond the bases.

Most of the coastal bluffs in the vicinity of Encinitas are active cliffs. Active sea cliffs are shaped by two types of erosion. Marine erosion occurs at the base of cliffs as rock and plant material are washed against the cliffs by sea water. This abrasive action can undercut the cliff which may result in rock falls and slumps of the upper portion of the cliff. The second type of erosion, subaerial, occurs as clay minerals in the cliff become saturated. Lubricated clay layers may act as a slip plane for a landslide.

Urbanization has accelerated erosion by both marine and subaerial processes. The damming of rivers has reduced their contribution of sediment to the ocean and beaches, and the associated reduction in sand has caused increased erosion of sea cliffs. The local construction of sea walls and riprap barriers has been used in an attempt to partially offset this impact. The construction of buildings atop the cliffs and on their faces has increased subaerial erosion. Such development has included the oversteepening and overloading of cliff areas, the removal of vegetation, and both accidental and intentional release of water along the cliff face and into the bluff itself. Erosion has been further aggravated by the construction of fences, storm drains and stairways on the bluff tops and, in some instances, by the very improvements which were actually intended for bluff protection.

Erosion has created caves in some areas of the sea cliffs. While the caves are a unique physical feature, they can be a hazard. As erosion enlarges a cave, the cliff may become unstable and collapse into the cave.

In the early 1970's, the construction of apartments and condominiums began to occur along the edge of the bluffs. This development was based on studies, conducted by consultants for the developers, which indicated that there had been negligible erosion in the area since 1938. These studies did not recognize that erosion of the bluffs and cliffs was directly related to climatic changes and was likely to be episodic and site-specific. In addition, these investigations did not consider the impacts of urbanization on the cliffs.

Failures which can be considered the result of urbanization involved both landslides and block falls. In most cases, the collapses occurred as instantaneous failures, with masses separating from the cliff face along fractures, joint sets, and contact planes. At least 15 block falls along the cliffs at Encinitas occurred during the dry years of 1973 to 1977, with blocks of varying dimensions, ranging from 1 to 12 feet across, 5 to 110 feet in length, and up to 32 feet in height.

Although these failures were partially related to undercutting of the cliff, they were more directly caused by a steady rise in the ground water levels along these areas associated with urbanization; that is, the failures resulted from the excessive watering of lawns, agricultural irrigation, the growing of non-native vegetation, and the use of septic tanks, leach lines and cess pools. In some cases, irrigation of landscaping may be the equivalent of 50 to 60 inches of precipitation per year.

A landslide occurred along the cliffs between Sea Cliff County Park (Swamis) and Cardiff State Beach in April 1958. With this event, a section of Highway 101 collapsed and approximately 300 feet of one traffic lane was lost. Prior to the failure, the cliffs had been nearly vertical and were eroding due to the situation of bluff soils. Subsurface drains were subsequently installed parallel to the existing railroad track, inland from the cliffs, and pipes were extended down the cliffs to remove the ground water. The base of the slide was then removed and the slope face was shaved back and stabilized. Rocks were positioned along the cliff base in an attempt to reduce the rate of erosion.

The grading of bluff tops, especially when done to the edge of the slope, has created drainage courses which allow surface runoff to erode the bluff-top edge and bluff face, as well as initiating slope failures. When steps are taken to leave the terrace deposits and soil profile intact, and surface drainage is diverted, erosion of the bluff edge is slowed significantly.

The spraying of gunite and the construction of concrete buildings or improperly designed support structures along a cliff face or top may also dramatically accelerate erosion. This type of problem was experienced along the coastline of the Leucadia community in 1982.

Both public and private stairways have been installed along the Encinitas coastline at various times. Each homeowner in Leucadia had a private stairway to the beach at one time. Many of these stairways have been lost in recent years as a result of erosion caused by nearby broken storm drains and ground water induced spring-sapping of the cliff. The cliffs are much steeper in Old Encinitas and only a few public or private stairways have been constructed. A public stairway was installed at "D" Street at cost of \$100,000 in 1977, but was destroyed due to the breaking of an underground water main.

In addition to the problems with bluff erosion, Encinitas has experienced another form of coastal erosion problem along the northerly mouth of the San Elijo Lagoon. There the bluffs descend to a sandbar that crosses the mouth of the lagoon. A number of restaurants have been constructed on this barrier bar during recent years. Those restaurants located on the seaward side of Highway 101 were severely damaged during the winter storms of 1982-1983. Both beach cobbles and rocks were thrown through the restaurants. These large rocks, up to a half ton in size, actually rolled seaward on the cobbles and were then catapulted through the buildings and onto the highway by wave action. Although repairs were subsequently made to the restaurants, future storms may result in a recurrence of the 1982-83 events.

Wildfires

Wildfires are a significant threat in two separate areas of Encinitas. The first includes much of the eastern portion of the City where much of the area is undeveloped and covered with chaparral. Chaparral serves as excellent fuel for wildfires due to the resinous material contained in many species of chaparral plant. The second area where wildfire risk is high is the northern portion of the Planning Area including wilderness in the Ecke property and adjacent areas.

Although wildfires are a potential hazard all year for this area, the risk is increased during certain times of the year due to atmospheric conditions. Normally, Encinitas experiences cool westwinds, which blow inland off the ocean. At times during the period from September to February, the Encinitas area experiences Santa Ana conditions. These conditions usually last for a two-day period and consist of hot, dry east winds. When humidity is less than 10% and the Santa Ana winds exceed 20 miles per hour, wildfires tend to spread quickly and are difficult to fight. About every five years, however, a series of two to three days of Santa Ana conditions occurs. These periods may increase the possibility of wildfires.

The east winds would blow a wildfire toward the west. In other words, the fire would be driven in the direction of developed land and denser human population. The last major wildfire in the eastern section of the City occurred in 1946-47. Therefore, chaparral growth is 40 years old and the fuel load provided by this overgrowth may increase the potential wildfire hazard in coming years.

Nuclear Accident Hazard

The potential for nuclear accident and the resulting actions that would be required to minimize any adverse impacts have been examined by the Nuclear Regulatory Commission. The San Onofre nuclear power plant is approximately 30 miles northwest of the City of Encinitas. In the event of a major nuclear accident, an area consisting of approximately ten miles around the plant would need to be evacuated. Encinitas is not included in this area, which is referred to as the emergency planning zone. Encinitas, however, is within the ingestion pathway zone which also includes all areas within approximately 50 miles of the plant. In a major nuclear plant accident, radioactive isotopes are released into the atmosphere. The wind carries this

radioactive material until it drops to the ground. On the ground this material can directly contaminate soils, water, vegetables and other agricultural products. In addition, the radioactive material may enter the food chain through ingestion of contaminated plants and grains by animals. For these reasons, agricultural products within the ingestion pathway zone would have to be replaced in the event of a major nuclear accident at San Onofre.

The San Onofre nuclear power plant is designed with extensive safety and back-up safety features. According to the Nuclear Regulatory Commission, the probability of the failure of the safety system at the plant is very low, and it is highly unlikely that a major nuclear accident will occur at San Onofre.

Hazardous Materials/ Chemical Spills

Hazardous materials are transported by truck on most major highways in California though companies transporting this material must be licensed by the State. The California Highway Patrol (CHP) distinguishes between three categories of hazardous substances: hazardous material, hazardous waste, and explosives. The CHP defines hazardous material as a substance which is a virgin or unused product which is generally being transported to a manufacturing site. Hazardous waste is a substance which is a by-product or used material and is normally being transported to a disposal site. Finally, explosives are munitions or any other substance that can be detonated.

The CHP monitors the transportation of hazardous substances through the State. As of October 1987, approximately 6,302 vehicles were registered as carriers of hazardous materials. One hundred and twenty-three companies were licensed to transport hazardous waste. The CHP has the authority to ban the transportation of hazardous waste on highways under their jurisdiction. At the present time, state regulated highways in Encinitas are not restricted. With regard to explosives, the CHP releases a periodic bulletin identifying approved routes for the transportation of these materials.

Hazardous wastes, as defined by the CHP, are generally the most toxic type of substances which are transported. A spill of these substances, usually associated with a traffic accident, could threaten public safety. The CHP reports that

hazardous waste haulers have been involved in an average of 22 accidents a year over the last four and one-half years. This figure includes all accidents on State regulated highways in California.

The San Diego County Department of Public Health maintains a Hazardous Incident Response Team (HIRT) that is equipped to respond to accidents involving hazardous materials. All incorporated cities contribute funds to maintain this program. The HIRT team was called on three occasions to emergency situations in the City in 1986.

The probability of an accident is based on several variables including road conditions, driver alertness, and traffic conditions. For this reason, it is difficult to assess the likelihood of a toxic spill due to an accident at any one place or time. An accident involving vehicles carrying hazardous materials could occur along that portion of I-5 as it passes through the City though the likelihood of such an accident is considered low.

Railroads also transport many types of products including some type of hazardous material. In Encinitas, the rail line runs north and south and is located on the western side of the City. Presently, the line is predominately used by AMTRAK for passenger travel rather than for freight transport.

HAZARD AND RISK ASSESSMENT

Level of Risk

The natural and man-made hazards which may impact the residents of Encinitas are identified in Tables 3 and 4. These tables identify the level of risk for a number of hazards and the extent of the affected area.

Each potential hazard that could affect the public safety and welfare of Encinitas residents has been assessed according to the following levels of risk:

1. **Low Risk:** The level of risk at/or below which no specific action (eg. preparation, emergency resources, etc.) is deemed necessary;
2. **Medium Risk:** The level of risk above which specific action is required to protect life and property; and
3. **High Risk:** Risk levels are significant and occurrence of a particular emergency is highly probable or inevitable and specific actions are required to prepare for and respond to an emergency.

Scope of Risk

The "scope of risk" refers to the geographic area that could be potentially affected with the occurrence of one of the hazards. The scope of risk has been categorized according to local/citywide impacts and regional impacts.

Table 3 summarizes the local and citywide impacts that might result from a number of hazards that exist locally. Those hazards that might affect not only the City of Encinitas but also the surrounding region are identified in Table 4.

Emergency Response

The State Office of Emergency Services (OES) has established three levels of emergency response to peacetime emergencies which are based on the severity of the situation and the availability of local resources in responding to that emergency. The three levels of emergency response include the following:

- Level 1: A minor to moderate incident wherein local resources are adequate in dealing with the current emergency.

Level 2: A moderate to severe emergency where local resources are not adequate in dealing with the emergency and mutual assistance would be required on a regional or statewide basis.

Level 3: A major disaster where local resources are overwhelmed by the magnitude of the disaster and State and Federal assistance are required.

In general, the scope of risk will dictate the appropriate emergency response level. The Council on Intergovernmental Relations (CIR) Guidelines separates risk into three categories:

Acceptable Risk: The "level of risk" below which no specific action on the part of the government is deemed necessary or appropriate;

Unacceptable Risk: The "level of risk" above which specific action by the government is deemed necessary to protect lives and property; and

Avoidable Risk: Risk which is unnecessary because individual or public goals may be achieved by other means at the same cost or less than the total cost.

Acceptable risks generally require little or no participation on the part of the government. Therefore, the Public Safety Element should focus on planning for unacceptable levels of risk. The Public Safety goals and policies should identify the necessary government actions required to protect life and property from those hazards with unacceptable levels of risk.

Local/City Scope of Risk

Surface rupture: Due to the absence of active local faults, the potential for surface rupture is very low.

Liquefaction: Potential for liquefaction is low. There are some risks in those areas adjacent to the lagoons where sandy soils are present. Impacts should affect localized areas and might cause some property damage and human injury. Local resources should be adequate to address the emergency.

Ground-shaking: Ground-shaking associated with offshore or regional earthquakes has a high probability of occurrence. Under the major event scenario, potential human loss is substantial. State and possibly Federal assistance will be necessary for rescue operations and rebuilding efforts.

Tsunami: Tsunamis are not likely along the San Diego County Coast due to offshore topography. If a tsunami did strike the Encinitas area, there is potential for human loss along the coast. Regional, State and perhaps Federal assistance may be required for clean-up operations and rebuilding efforts.

Dam failure: The potential for dam failure is low. If a dam were near capacity and released the water abruptly, property damage and loss of life could occur. Regional or State assistance may be required to deal with the effects of such a disaster.

Landslide: Certain areas, especially the coastal bluff area in the Coastal Communities are susceptible to landslides. These events are generally very localized but can result in a loss of property. Generally, this type of incident can be handled at the local level.

Flooding: In the event of a major flood, damage to structures, roads and other property can occur. Regional or State assistance may be necessary for clean-up and reconstruction.

Wildfire: Wildfires in the unimproved areas of Encinitas are a concern to the local fire districts. Property damage would occur if the wildfires spread to the developed areas of Olivenhain and New Encinitas.

Structural fire: This event would result in a loss of property. Resources at the local level should be able to handle the emergency. In addition, there are some risks associated with the transport of natural gas through the SDG&E transmission line located in the City.

TABLE 3 LOCAL/CITY ENVIRONMENTAL HAZARD ASSESSMENT			
Hazard	Potential for Occurrence	Potential for Human Loss (life or property)	Level of Emergency Response
Surface rupture	low	medium	1
Liquefaction	low	medium	1
Groundshaking	high	high	2-3
Tsunami	low	medium	2
Dam failure	low	high	2
Landslide	medium	medium	1
Flooding	medium	medium	1-2
Wildfire	medium	medium	1-3
Structural fire	low	medium	1

Regional Scope of Risk

Earthquakes: The potential for a major regional earthquake is high as is the potential for loss of human life, human injury, and property damage. A major earthquake would disrupt communication, sewer, and water services and hinder transportation routes. Federal and State resources would be needed for rescue and reconstruction assistance.

Wildfire: Areas in and around Encinitas, including the mountainous area to the east, are potential wildfire zones. Under certain conditions, fire spreads rapidly and is difficult to fight; property damage is a concern. The assistance of the State may be needed to control and extinguish a major wildfire.

Nuclear Accident: Although the potential for a nuclear accident is low, a major nuclear accident at San Onofre could be devastating. Loss of life, human injury, and damage to agricultural property could be substantial. State and Federal assistance would be required for medical care, clean-up operations, and possible population relocation.

Severe Airborne Pollution Episode: Although San Diego County has periodic problems with certain air contaminants, severe air pollution is not a current problem. In the event of a major smog alert, human activity (physical exercise and vehicle use) may need to be restricted temporarily. State and Federal assistance would not be necessary.

Water Shortage: Since much of Southern California is arid and most of the water for the area is imported, the potential for a water shortage is high. Certain agricultural property (crops and animals) may be lost. State assistance may be needed in reallocating water resources in the event of a prolonged drought.

TABLE 4 REGIONAL ENVIRONMENTAL HAZARD ASSESSMENT			
Hazard	Potential for Occurrence	Potential for Human Loss (life or property)	Level of Emergency Response
Earthquake	high	high	3
Wildfire	medium	medium	2
Nuclear Accident	low	high	3
Severe Airborne Pollution Episode	low	low	1
Water Shortage	high	low	2

RECREATION ELEMENT TECHNICAL REPORT

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UNIVERSITY OF CALIFORNIA

Encinitas
General Plan

RECREATION ELEMENT TECHNICAL REPORT
CITY OF ENCINITAS GENERAL PLAN

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	RTR-1
Purpose of this Report	RTR-1
Issues and Opportunities	RTR-1
DESCRIPTION OF EXISTING FACILITIES	RTR-3
City Parks and Facilities	RTR-3
Beaches	RTR-4
Beach Access/Vistas	RTR-7
County Parks	RTR-8
Public School Sites	RTR-9
Hiking/Equestrian Trails	RTR-10
PARK FACILITIES NEEDS ASSESSMENT	RTR-11
Factors Affecting Future Park Needs	RTR-11
Determination of Park Needs	RTR-12
Assessment of Trails	RTR-23

LIST OF TABLES

		<u>Page</u>
Table 1	Existing Park Facilities	RTR-4
Table 2	Recreational Beaches and Facilities	RTR-7
Table 3	Beach Access and Vistas	RTR-8
Table 4	Classification of Existing Facilities	RTR-13
Table 5	Park Facilities Needs Assessments	RTR-16
Table 6	Analysis of Park Space Needs by Community	RTR-18
Table 7	Needs Assessment for Specialized Facilities	RTR-22

LIST OF FIGURES

Figure 1	Existing Parks and Recreation Facilities	RTR-6
Figure 2	Park Acreage Needs Assessment	RTR-17
Figure 3	Park Service Areas Needs Assessment.	RTR-20

INTRODUCTION

Purpose of this Report

This Technical Report describes the existing parks and recreational facilities in the City of Encinitas and assesses need for additional facilities. The City, with incorporation, assumed control of parks and related facilities that were previously under the San Diego County Parks and Recreation Department.

The first section of this Technical report describes existing parks owned and maintained by the City, County parks, school facilities used for recreation, beaches, and other specialized facilities such as equestrian and hiking trails. The second half of this report is devoted to assessing the existing needs of the community in terms of parks and recreational facilities.

Issues and Opportunities

The City of Encinitas has experienced substantial residential development in recent years. This development has had a direct bearing on the availability of parks and other recreational facilities such as athletic fields, game courts and playgrounds. In addition, the recreational needs of the older, well established communities have also changed over time due to changing demographics. A number of issues have emerged in recent years with regard to parks and recreation in the City.

- The costs for financing major capital improvements in the City's parks will continue to rise in coming years. In addition, it will become increasingly difficult for the City to obtain undeveloped land for new park sites.
- The City is presently deficient in improved recreational open space according to standards established by the National Recreation and Parks Association (NRPA).
- Encinitas is also deficient in the range of specialized facilities, such as game courts, athletic fields, etc. that would normally be required in a City of this size.
- Recent trends in land use law will make it increasingly difficult for the City to reserve open space for recreational use in the future.

The local environment provides the City with a number of opportunities to capitalize on the rich and diverse recreational amenities:

- ° The beach area will continue to be a dominant recreational resource in the City in the future. The City is fortunate in having the extensive network of beaches within its boundaries. The function and utilization of the beaches are distinctly different from that of more traditional parks.
- ° Large portions of the planning area are presently undeveloped and many of these land holdings are under single ownership. There will be opportunities in the future for the City to purchase or negotiate development agreements that will provide parkland in these areas.
- ° There is considerable public interest and support concerning parks and other recreational facilities. Public involvement will be crucial in the development of new parks and facilities in the coming years.
- ° Some of the deficiency concerning park space and facilities can be overcome with the establishment of joint use agreements with the school districts and other public and quasi-public agencies. A number of agencies and districts have already demonstrated a willingness to work with the City in providing residents with new recreational facilities.
- ° A number of easements, including those for flood control and utilities located in the City, present Encinitas with a unique opportunity to create a system of trails and bikeways for use by the residents.

DESCRIPTION OF EXISTING FACILITIES

There are a variety of parks and other open space areas used for recreational purposes within the City including State and City beaches, County parks, City parks, and private facilities. This section of the Recreation Element Technical Report describes existing City owned and operated parks, County parks, beaches, beach related facilities (accessways and vistas), trails and school facilities that may be adapted for public use.

City Parks and Facilities

The City of Encinitas presently owns nine park sites. Five are improved parks and the four remaining designated parks are actually unimproved sites. In addition, the City Parks and Recreation Department maintains four small sites for beach access and vistas. In all, there are 28.08 acres of improved park land and 11.74 acres of unimproved park land. The facilities and activities vary from park to park. A brief description of each park follows:

Encinitas Viewpoint: This park occupies 2.43 acres in the Community of Old Encinitas.

Glen Park: This 3.5 acre park is located at 2149 Orinda Drive west of San Elijo Avenue in the southern portion of Cardiff-by-the-Sea. This park includes picnic areas, a basketball court, tennis court, playground, Scout house, and restrooms.

James MacPherson Park: This park is a 2.0-acre unimproved site located at 945 Orpheus Avenue in Leucadia.

Leucadia Roadside Park: This park is located along Highway 101 in Leucadia. The park acreage is approximately a third of an acre and improvements are limited to picnic tables and benches.

Mildred MacPherson Park: This park site consists of .94 acre of undeveloped land located at 1045 Vulcan Avenue in Old Encinitas.

Oak Crest Park: Oak Crest Park has an area of 21.85 acres and is located at 1140 Oak Crest Park Road south of Encinitas Boulevard in Old Encinitas. This park is the largest facility owned and operated by the City and includes passive open space, two playgrounds, picnic areas, and a restroom facility. In addition, a large portion of the site includes a botanical reserve containing a number of sensitive plant species.

Orpheus Park: This park site has an area of 2.5 acres and is presently undeveloped. The site is located at 482 Orpheus Avenue in Old Encinitas.

Sun Vista Park: Sun Vista Park is a 4.16 acre unimproved site located west of Rancho Santa Fe Road between the communities of Olivenhain and New Encinitas.

Olivenhain Road Park: This 2.14 acre unimproved park site is located in the community of New Encinitas.

**TABLE 1
EXISTING CITY PARK FACILITIES**

Park	Area	Facilities
Encinitas View Point	2.43 acres	Picnic areas, passive open space
Glen Park	3.5 acres	Picnic areas, basketball & tennis courts, and bike trail easement
James McPherson	2.0 acres	Unimproved
Leucadia Roadside	.3 acres	Picnic area
Mildred MacPherson	.94 acres	Unimproved
Oak Crest Park	21.85 acres	Picnic area, playground
Olivenhain Road	2.14 acres	Unimproved
Orpheus	2.5 acres	Unimproved
Sun Vista	<u>4.16 acres</u>	Unimproved
Total Park Acreage	39.82 acres	

Beaches

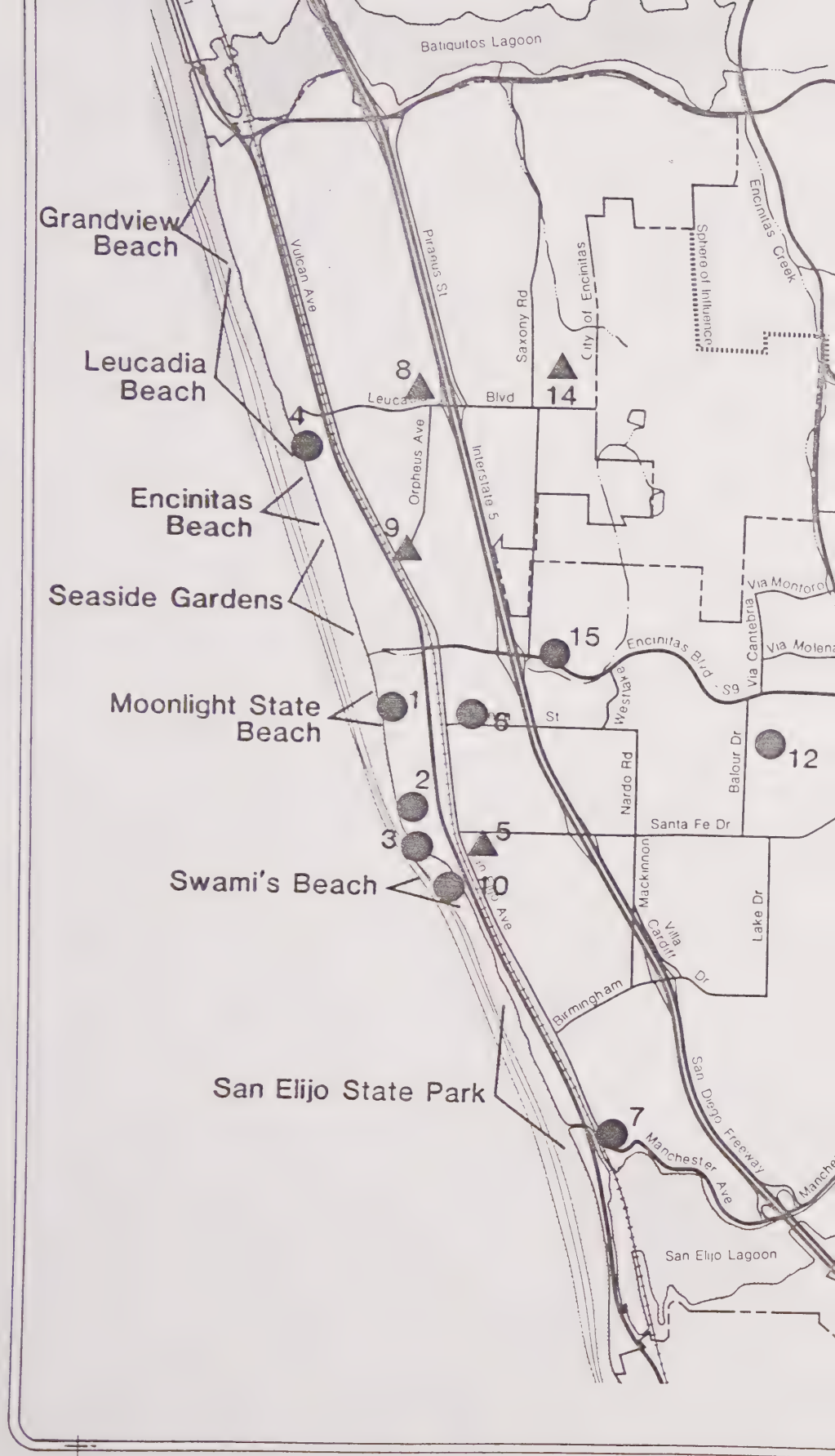
There are a number of beaches within the City of Encinitas which provide much of the recreational open space in the City. After the City was incorporated, the County-controlled beaches were turned over to the City. In addition, the City is in the process of entering into a 20-year agreement with the State to transfer control of the State beaches (Moonlight, Leucadia, and Grandview) to the City. The State of California is presently responsible for the maintenance and operation of the three State Beaches.

The existing City beaches include Encinitas Beach, Seaside Gardens Park, and Swami's Beach. The four beaches presently under the jurisdiction of the State of California include Leucadia State Beach, Moonlight State Beach, Grandview Beach access and San Elijo State Beach Park. The City will assume control over State beaches once a 20-year operations agreement is approved. The City of Encinitas presently has a contract with the City of Solana Beach to provide lifeguard services for the three City beaches. All seven beaches within the City are discussed below in greater detail and their locations are indicated on Figure 1.

Encinitas Beach: Encinitas Beach is located in the community of Leucadia, west of Neptune Street at the end of Athena Street. The beach has a total area of 2.36 acres.

Seaside Gardens: This beach has a total area of 9.47 acres and is located in the community of Old Encinitas just south of Encinitas Beach. The beach is commonly referred to as "Stone Steps", a name derived from the massive concrete steps that provide access from the bluffs above.

Swami's: This facility includes both a beach and a landscaped park on the bluffs overlooking the beach. This entire facility was officially designated Sea Cliff Park while it was under the jurisdiction of the County. When the City took over control of this beach, Sea Cliff Park was renamed "Swami's", a name that locals used for the beach for many years. The beach is located adjacent to the Self Realization Fellowship Temple. The "beach park" consists of 1.55 acres including landscaped areas for picnic and passive recreation located on the bluffs overlooking the beach.



Leucadia State Beach: Leucadia State Beach is located in the community of Leucadia and is located west of Neptune Street. Leucadia State Beach has a total area of approximately 10.5 acres.

Moonlight State Beach: Moonlight State Beach is located south of Encinitas Boulevard in the community of Old Encinitas. The 18-acre State Beach includes landscaped areas inland from the beach for picnicking and passive recreation and parking. Five parcels of State owned land adjacent to the beach park have been declared surplus property by the State.

San Elijo State Beach Park: This beach is a fully improved beach in the southern portion of the Cardiff-by-the-Sea community. The 78-acre State park includes facilities for overnight camping as well for as other amenities for visitors to the beach.

TABLE 2 RECREATIONAL BEACHES AND FACILITIES			
Beach	Status	Community	Acreage
Encinitas Beach	City	Leucadia	2.36
Seaside Gardens	City	Old Encinitas	9.47
Swami's Beach	City	Old Encinitas	<u>1.55</u>
Subtotal			13.38 acres
Grandview	State	Leucadia	4
San Elijo State Park	State	Cardiff-by-the-Sea	78
Leucadia State Beach	State	Leucadia	10
Moonlight State Beach	State	Old Encinitas	<u>18</u>
Subtotal			110 acres
Total Area of Beaches			123.38 acres

Beach Access/Vistas The City maintains a number of small park sites that provide either access to the beach or serve as vistas for observing the beaches and ocean. The function of these small areas differs from that of

the more conventional recreational facilities considered in this analysis. First, their use is limited due to their small size which is, on the average, less than one-half acre. Secondly, all of these vistas/access points are situated on bluffs and their use by small children or for active recreation should be discouraged. There are four access/vistas within the City at the present time including the following:

D Street Access: This facility occupies .10 of an acre located at 450 "D" Street in Old Encinitas. The small facility provided access to the beach areas south of Moonlight Beach in the past though the stairway was destroyed in a storm. the access has a vista overlook with turf and a bench.

"H" Street: This small half-acre park is a vista point located at the end of "H" Street in Old Encinitas.

"I" Street Park: "I" Street park has a total area of .18 acres and is located west of "I" Street and Sea Land Drive in Old Encinitas. The facility is a vista point and provides no access to beach at this location.

"J" Street Access: This facility is an unimproved site totaling 0.58 acres. Current City proposals call for this site to serve as an access to the beach just north of Toganada Gardens in Old Encinitas.

TABLE 3 BEACH ACCESS AND VISTAS		
Access/Vista	Area	Description
"D" Street Access	.10 acre	Beach access
"H" Street Access	.50 acre	Vista point
"I" Street Vista Park	.18 acre	Vista point
"J" Street Access	.58 acre	Unimproved (future access)
TOTAL	1.36 acres	

County Park Facilities

Until the City was incorporated in 1986, all of the parks within the City were maintained by the San Diego County Parks and Recreation Department. Three of these facilities were retained by the County after incorporation. The Local Agency Formation Commission recommended that the County retain control over the Quail Botanical Gardens, and Magdalena Ecke Park. A fourth County Park, San Elijo, was created after incorporation. A site formerly used for a landfill was proposed for a park at one time though there are no specific plans for development at this time.

Quail Botanical Gardens: The Quail Botanical Gardens consists of approximately 25 acres. The site's use is restricted to the maintenance of an extensive collection of native and exotic plants.

Magdalena Ecke Park: This designated park is actually an unimproved park site located within the Ecke land holdings in the easternmost portion of Leucadia. The 35-acre site has limited access and is further constrained by steep topography which limits the site's utility for active recreation other than hiking or jogging trails.

San Elijo County Park: San Elijo County Park is the most recent addition to the inventory of County Parks within Encinitas. The 800-acre park actually is a nature preserve and there are no plans for any active recreational facilities other than hiking and equestrian trails that will be located either within or adjacent to the park. No definitive plans for future improvements are available at this time.

Encinitas Landfill Site: This site, presently unnamed, is located above a former landfill in the community of New Encinitas and has been proposed as a site for a new community park. The LAFCO report prepared prior to the City's incorporation recommended that the County retain possession of the site for future development due to potential liability that may arise. There are no definite plans for improving the site at the present time and the site is presently administered by the County Public Works Department.

Public School Sites

Educational facilities within the City of Encinitas run the full spectrum including a high school, two junior high schools, eight elementary schools, and a community college. These facilities are

administered by the San Dieguito High School District, Encinitas Union School District, Cardiff Elementary School District, and the Mira Costa Community College District.

At the present time, there are no formal agreements for the joint use of school sites by the City for recreational purposes. The City Parks and Recreation Department is concluding negotiations with the San Dieguito High School District for the joint use of athletic fields at Oak Crest Junior High School. The City is also concluding an agreement with the Cardiff Elementary School District regarding the use of a ten-acre site located in Cardiff-by-the-Sea near Birmingham and Lake Drives. Under the proposed agreement, the City would develop the site as a park and lease the property from the District for one-dollar per year.

Cardiff Elementary School has an area posted for public use indicating hours that the public may use the facilities which include a baseball field, soccer field, and playground equipment for small children. There are no formal arrangements between the City and the Cardiff Elementary School District regarding the maintenance or public use of the site. Apparently an arrangement was made with the County when the school site was first purchased by the school district.

Hiking/Equestrian Trails

There is considerable community interest in establishing a City-wide system of trails, both for hiking and equestrian uses. A number of bicycle, hiking, and equestrian trails within the City are identified in the San Dieguito Community Plan, Part VI prepared by San Diego County. Bikeways follow El Camino Real, La Costa Avenue, Manchester Avenue, Encinitas Boulevard, and along Old Highway 101. A number of hiking and riding trails are also identified, particularly in that portion of Leucadia east of the Freeway and in the undeveloped portions of new Encinitas and Olivenhain.

A number of private organizations have expressed interest in establishing a City-wide system of hiking and equestrian trails. One of these proposals, prepared by the San Dieguito Riders, proposes a system of equestrian and hiking trails that would provide continuous links throughout Olivenhain, New Encinitas, and Cardiff-by-the-Sea. The proposed trails plan makes use of existing trail links as well as unimproved areas that have been designated by the County as future trails. At the present time, the City does not administer or maintain any trails.

PARK FACILITIES NEEDS ASSESSMENT

Factors Affecting Future Park Needs

A number of factors will ultimately determine both the need for park facilities and the City's ability to provide for these facilities and services:

- ° There have been significant changes in the attitudes towards recreation and leisure in recent years. There is greater awareness concerning the relationship between exercise and good health. More and more adults are involved in activities (jogging, bicycling, etc.) that promote good health.
- ° Changes in the standard of living have resulted in more free time for persons to enjoy recreational pursuits.
- ° Demographic trends in recent years have resulted in a new "baby boom" among young adults in their late 20's, 30's, and early 40's. While the trend varies considerably from community to community, children will continue to make up a significant proportion of the City's population in coming years.
- ° Housing types have also influenced park needs in Encinitas. Higher density housing such as apartments and condominiums lack the open space amenities found in single-family neighborhoods. As a result, residents living in higher density neighborhoods are generally more dependent on parks.

While the demand for new facilities will increase in coming years, a number of other factors may constrain the City's ability to provide for new parks and to maintain the present level of service throughout the City:

- ° Future constraints affecting the ability of the City to generate revenue, similar to those cutbacks experienced with the passage of Proposition 13, will impair the City's ability to finance new capital improvements. Any future fiscal cutbacks could also reduce the amount of money available to cover operating and maintenance costs for both existing and future facilities.

- General trends concerning liability and the insurability of the City of Encinitas in the future will have a significant impact in the types of facilities that will be offered. Rising insurance costs will also reduce the amount of money available for parkland acquisition and for capital improvements.
- New legal interpretations concerning land use law will impact the City's ability to reserve open space to be developed for park land in the future.
- The burden of providing for new park space will fall more and more on the private sector and on individual citizens in the community. As land costs rise and the availability of public funds decline, more emphasis must be placed on developing alternative strategies for financing new parks.

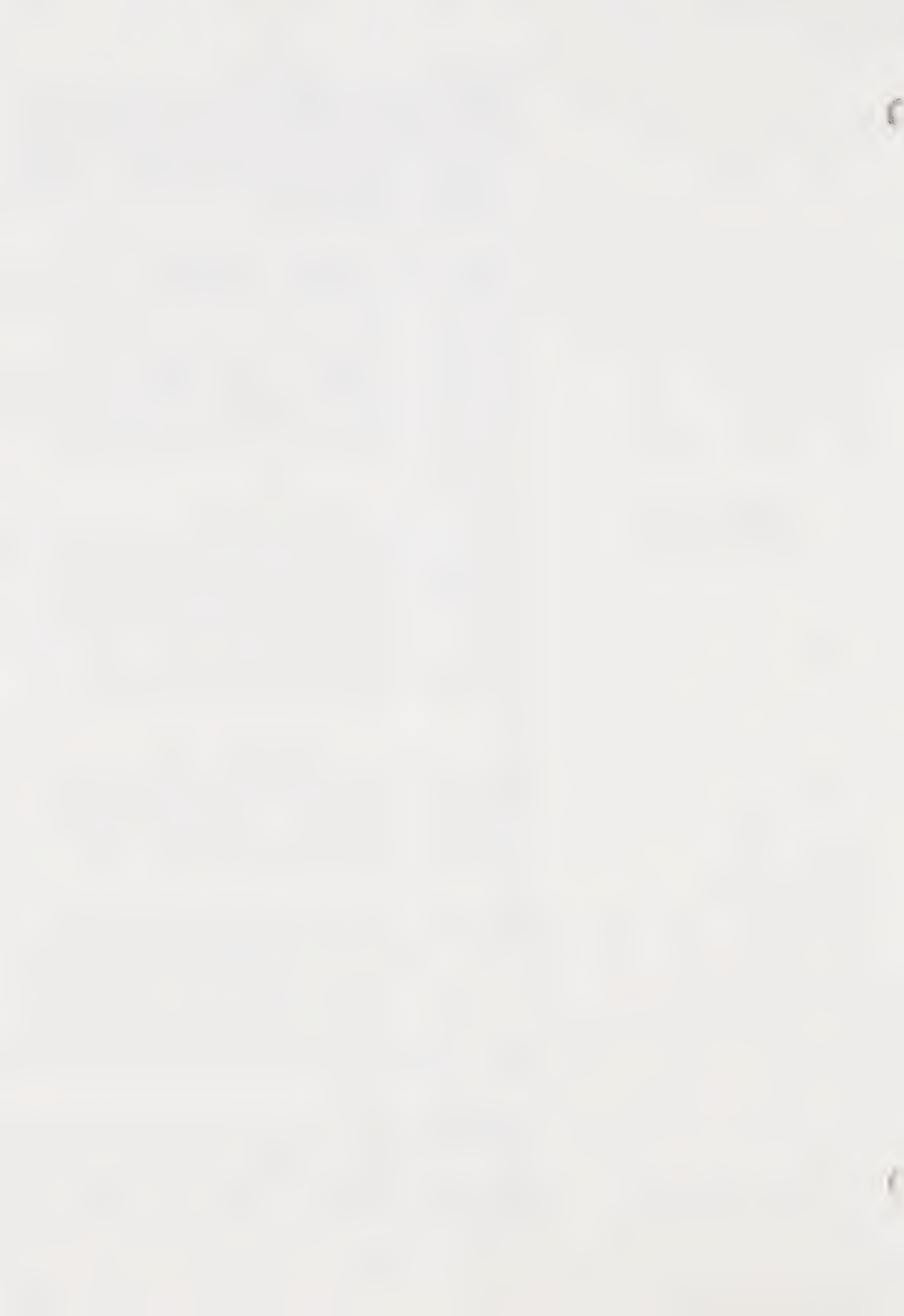
Determination of Park Needs

The National Recreation and Parks Association (NRPA) has developed a generic classification system for various types of park facilities and corresponding standards. This classification system may be applied to a broad range of communities and will require some modification to make it applicable to Encinitas. Standards, such as those devised by the NRPA, are useful in identifying existing deficiencies as well as projecting future park needs.

Three categories of park space identified in Recreation Park and Open Space Standards and Guidelines prepared by the NRPA generally apply to the parks in Encinitas. These park categories described below include mini-parks, neighborhood parks, and community parks.

Mini-Park: This type of park is designed to serve the specialized recreational needs of a specific group of persons such as small children or senior citizens. Mini-parks should be located near to where the users live and are generally less than 1.0 acre in area. The service area radius of mini-parks is generally $\frac{1}{4}$ mile and the standard generally calls for 0.25 to 0.5 acres of mini-parks per 1,000 residents.

Neighborhood Park: Neighborhood parks are generally centrally located in neighborhoods where the users live. The facilities should be situated to promote easy pedestrian access to the park. The service area radius for these facilities is between $\frac{1}{4}$ to

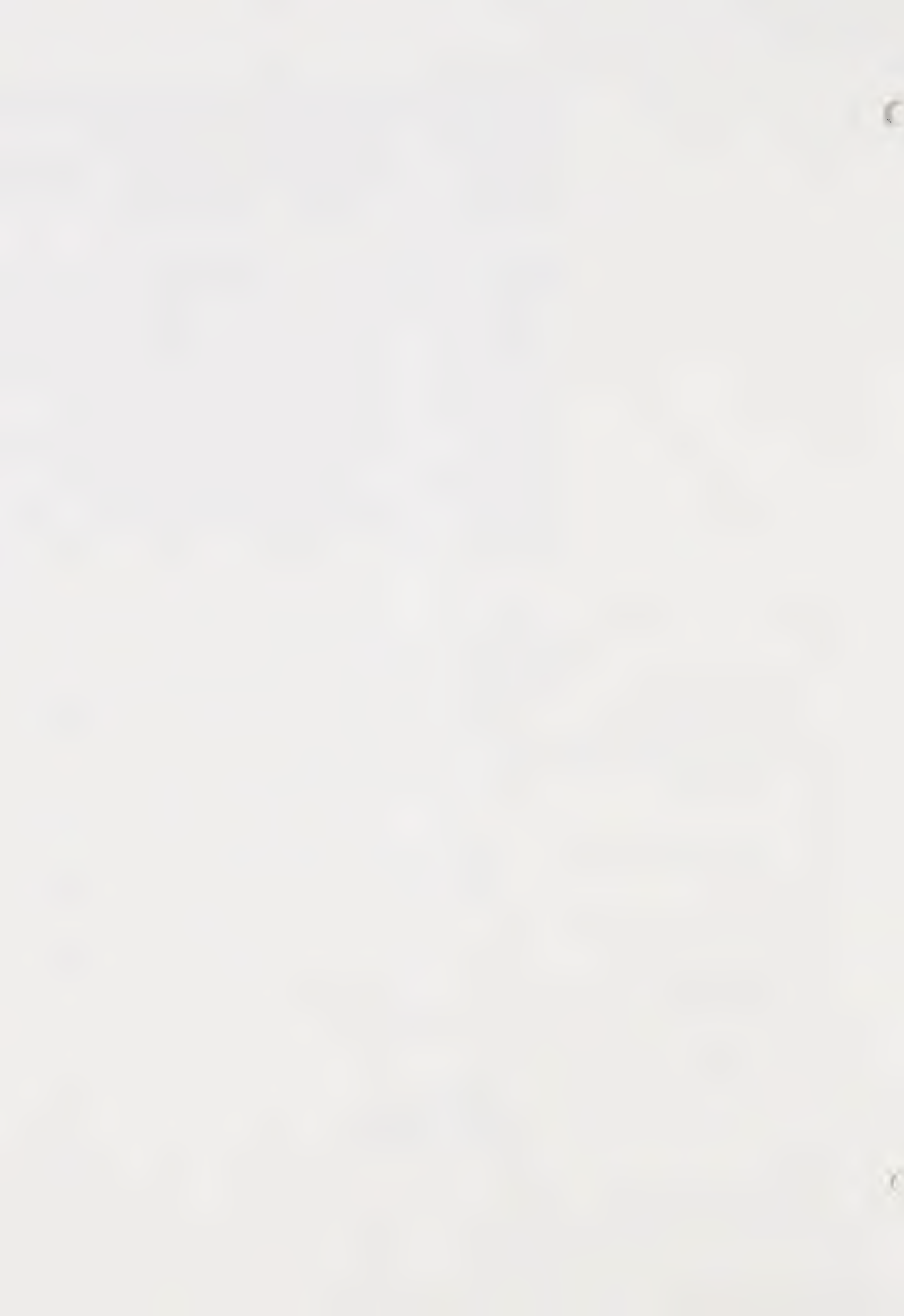


1/2 mile and generally serves up to 5,000 residents. According to NRPA standards, parks in this category should be at least 15 acres in size. More appropriate space standards for Encinitas should be between 5 to 10 acres. According to these same NRPA standards, there should be between 1.0 to 2.0 acres of neighborhood parks per 1,000 residents.

Community Park: This category of parks generally offers a wide range of recreational amenities to the surrounding community. These amenities may include athletic complexes, arenas, swimming pools, covered picnic areas, and playgrounds depending on the specific needs of the community and the availability of resources. Community parks generally serve a number of neighborhoods and have a service area radius of 1 to 2 miles. The size of these parks may vary though the NRPA cites the optimal size as being around 25 or more acres. For Encinitas, a more appropriate space standard would be between 10 and 25 acres. The population service standard for this category of parks is between 5.0 to 8.0 acres per 1,000 residents.

TABLE 4
CLASSIFICATION OF EXISTING FACILITIES

Category	Park Facility	Acreage
<u>Improved Parks</u> (Total Acreage = 28.08 acres)		
Mini Park	Leucadia Roadside Park	.30
		<u>.30</u>
Neighborhood Park	Encinitas View Point Park	2.43
	Glen Park	3.50
		<u>5.93</u>
Community Park	Oak Crest	21.85
<u>Unimproved Parks</u> (Total Acreage = 11.74 acres)		
Mini Park	Mildred McPherson	.94
Neighborhood Park	Orpheus	2.50
	Sun Vista	4.16
	James McPherson	2.00
	Olivenhain Road	2.14
		<u>10.80</u>
TOTAL PARK AREA		39.82



The needs assessment included in this report focuses on park acreage presently available, analysis of park service areas, and an analysis of specialized facilities (such as athletic fields, game courts, etc.) that would normally be required to serve a city the size of Encinitas. The needs assessment only considers the sites presently included in the City's parkland inventory though a distinction is made between those facilities that are fully improved as opposed to those that are undeveloped. The City is presently negotiating the joint use of a number of school facilities that would increase the available parkland inventory once the arrangements have been finalized. The needs assessment passes on the existing needs and not on the projected needs that will arise - with future population growth.

The needs assessment did not factor in parkland and open space areas available in the four County facilities for a number of reasons. First, San Elijo County Park and Quail Botanical Gardens have specialized functions that preclude their use for conventional recreation activities. San Elijo County Park will serve as a nature preserve while Quail Botanical Gardens is exclusively used as a botanical gardens. Secondly, the two remaining sites (Magdalena Ecke and Encinitas Landfill) are presently undeveloped and will not contribute to the City's parkland inventory in the near future since no specific plans have been made for their development. Finally, all four sites are administered by San Diego County and the City will have limited control over their future development in the absence of any formalized agreement.

The determination of park space and facilities requirements are based on the City's present (January 1987) population which has been estimated by the San Diego Association of Governments (SANDAG) to be 51,341 persons. Specific standards based on a ratio of population to park space or facilities (acres per 1,000 persons for example) utilized the population estimate provided by SANDAG.

Park Acreage Needs Assessment

The major factor which will ultimately determine future park needs will be the future population of the City. The land use policy included in the Land Use Element in the City's General Plan indicates the location and extent of future residential development in the City of Encinitas. New

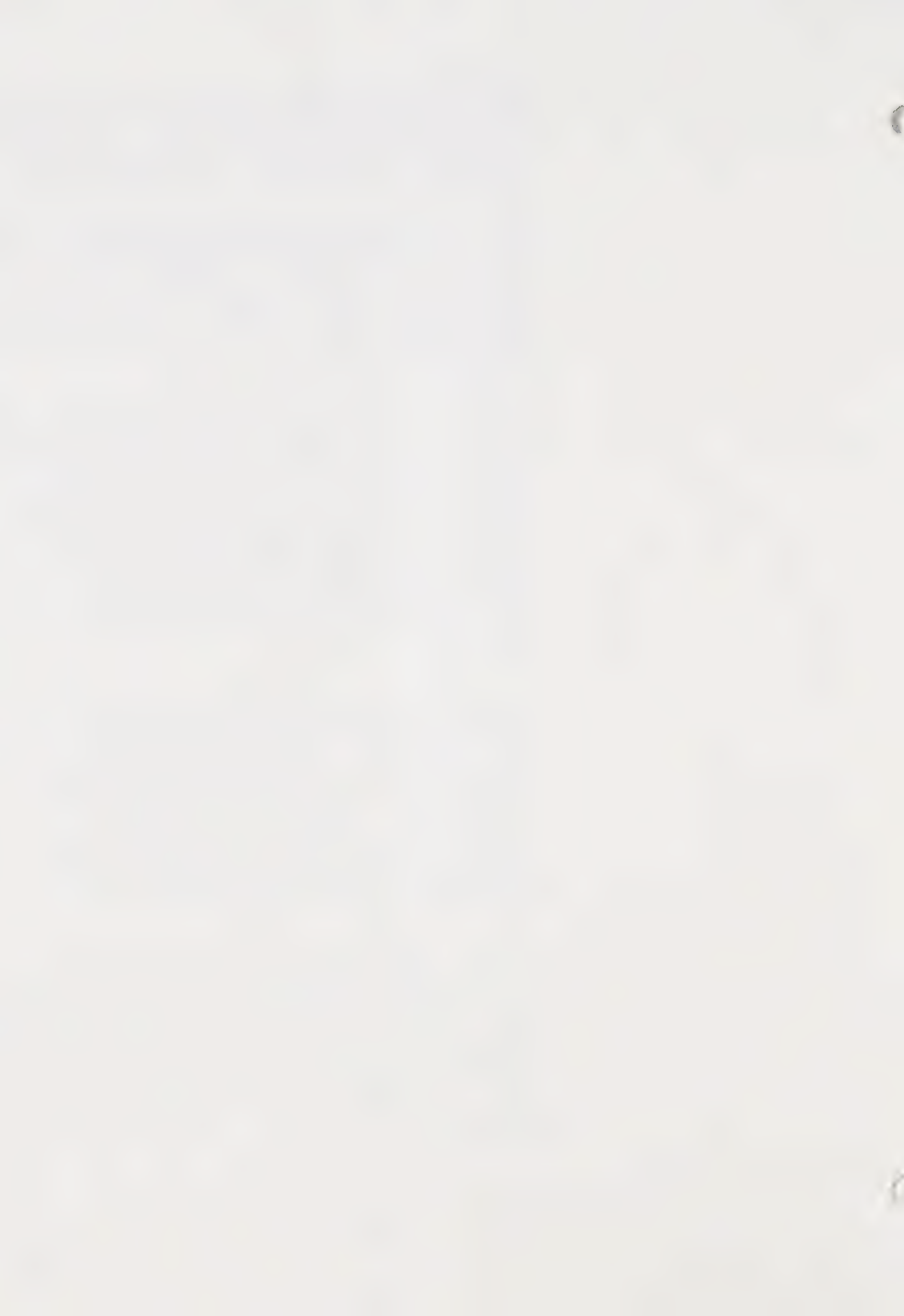
residential development and the resulting population will be the major factor affecting future population growth as well as future park needs. For purposes of this background analysis, however, the needs assessment will focus on existing deficiencies.

Table 5 compares the existing park acreage with the existing needs determined by NRPA standards. The standards for park space included in Table 5 consist of specific standards for each of the major categories of parks (Mini-Park, Neighborhood Park, and Community Park) as well as an overall "citywide" standard that considers overall recreational needs for any given community.

There is a wide range in the NRPA space standards for the three categories of parks (refer to Table 5). For example, the recommended space standard for community parks is between 5.0 to 8.0 acres per 1000 persons. In the City of Encinitas this standard translates into an existing need of between 122 to 146 acres. The lower end of the range is more applicable to communities that are largely suburban and have other public and private open space amenities. The upper range of these space standards apply to larger urban areas where open space is at a premium.

In terms of park space standards overall, the City is presently providing less than a fourth of the park acreage that should be provided based on the City's population. This gap between existing parkland and what is needed according to NRPA standards will narrow somewhat when the park sites that have been acquired are developed. The difference between what is available and what is needed, again using the NRPA standards, becomes more acute when looking at space standards for the individual categories of parks.

The City's deficiency in mini-parks is not so critical since virtually all of the City residential neighborhoods are developed as single-family where each individual unit has a private yard. Mini-parks are more important in downtowns or urban areas where development is very dense. In the latter case, for example, mini-parks may provide the only open space areas for children living in apartment buildings or condominiums.

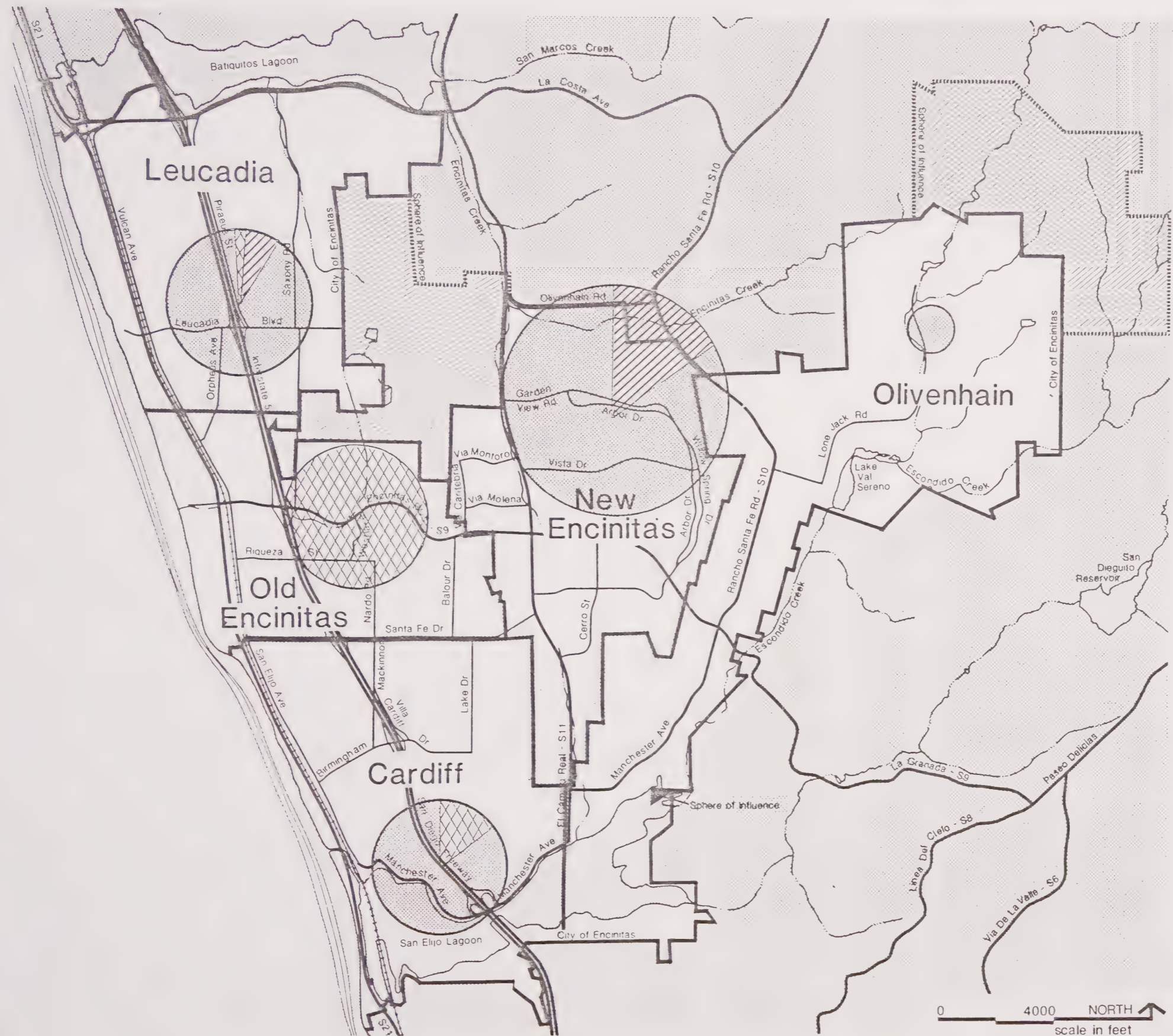


The more critical park space deficiencies concern neighborhood and community parks. At the present time, the City is severely deficient in park space in these categories of facilities. Most of this deficiency is due to the development that has occurred in the eastern half of the City without corresponding park site improvements. However, a number of sites have been acquired by the City for future park development. When these sites are improved, the parkland inventory of neighborhood parks will increase from 5.93 acres to 16.73 acres though a significant deficiency will remain. At the present time, there are no improved sites for larger community parks.

TABLE 5 PARK FACILITIES NEEDS ASSESSMENTS				
Park Category	NRPA Stand. Ac/1000	Total Existing Need in acres	Existing Acreage of Improved Parks	Improved Park Plus Acquired Park Sites
Mini Park	0.25-0.5	12.14- 24.78	.30	1.24
Neighborhood	1.0 -2.0	48-56- 97.12	5.93	16.73
Community	5.0 -8.0	242.79-388.46	21.85	21.85
Citywide	2.5 -3.0	121.40-145.67	28.08	39.82
NOTE: Assessment does not include beaches or county facilities				

The actual park space needs vary among the five communities. While the coastal communities (Leucadia, Old Encinitas, and Cardiff-by-the-Sea) have the highest residential densities, the need is offset somewhat by the availability of open space in the beach areas. At the other extreme, many of the homes in Olivehain have large lots of 1/2 acre or more which also reduces the need for passive open space in this community. However, the important functions that parks serve for both organized and informal sports activities as well as for passive recreation must be recognized. Private yards and beaches cannot completely fulfill these needs.

Figure 2 and Table 6 demonstrate the acute need for parkland in the five communities that comprise the City. Even when considering the park sites that are presently unimproved, all five communities are deficient in recreational open space.



Cardiff-By-The-Sea		
Required Acreage		23.75
Improved Acreage		3.50
Unimproved Acreage		0.00
Leucadia		
Required Acreage		25.17
Improved Acreage		0.30
Unimproved Acreage		2.00
New Encinitas		
Required Acreage		39.00
Improved Acreage		0.00
Unimproved Acreage		6.30
Old Encinitas		
Required Acreage		24.59
Improved Acreage		24.28
Unimproved Acreage		27.72
Olivenhain		
Required Acreage		8.89
Improved Acreage		0.00
Unimproved Acreage		0.00

- Improved Park Acreage
- Unimproved Park Acreage
- Required Park Acreage to Meet Minimum NRPA Standard of 2.5 Acres/1,000 Persons Based on Existing Population

Figure 2
Park Acreage
Needs Assessment

TABLE 6
ANALYSIS OF PARK SPACE NEEDS BY COMMUNITY

Community	25.5.0 acres/ 1000 persons	Existing Acreage (Improved)	Existing Acreage (Improved & Unimproved)
Cardiff-by-the-Sea	23.75- 28.49	3.50	3.50
Leucadia	25.17- 30.21	0.30	2.30
New Encinitas	39.00- 46.80	0.0	6.30
Old Encinitas	24.59- 29.51	24.28	27.72
Olivenhain	8.89- 10.66	0.0	0.0
Total	121.40-145.67	28.08	39.82

Park Service Area Needs Assessment

Another method of evaluating park needs involves a service area analysis. A park's service area is simply the geographic area where the majority of the persons using any particular park facility live. The NRPA has identified generalized service area standards that apply to each category of park. For example, the service area for mini-parks generally has a radius of less than 1/4 mile, the service area radius for neighborhood parks is generally between 1/4 to 1/2 mile, and community parks have a service radius of between 1 to 2 miles.

A service area analysis should also consider other factors than just the radial distance from the park. Major man-made or natural barriers will have an effect on the service area of any given park. A major roadway or freeway located near a park, for example, may discourage persons from using that facility even though they live nearby. For this reason, it is also important to consider these barriers when examining park service areas.

The service areas for all the existing City-owned park sites (both improved and unimproved) are indicated in Figure 3. With the exception of those neighborhoods in the vicinity of Oak Crest Park, virtually the entire City east of the San Diego Freeway is not within easy access of an improved park. The presence of two major arterial roadways located north (Encinitas Boulevard) and east (El Camino Real) of Oak Crest Park restrict use of the park by younger children living nearby.

The community of Leucadia is deficient in park space in those neighborhoods located between Vulcan Avenue and the San Diego Freeway and in the areas east of the freeway. The needs will be diminished somewhat if James McPherson and Orpheus parks are improved. That portion of Leucadia east of the freeway is totally lacking in City parks though the County has an unimproved park site (Magdalena Ecke) within this area. The park's utility is questionable, relative to the topography and access.

While there are no major City recreation facilities within the coastal communities west of Highway 101, the need for additional park space is diminished somewhat by the beaches. While the beaches and the parks serve distinctly different functions, the need for open space within these areas is partially mitigated by seven established beaches within the coastal communities.

At first glance, a number of neighborhoods within more recently developed areas of the City do not appear to be well served by recreational open space. A large number of these neighborhoods include developments with substantial commons area that could be utilized for informal recreational activities. Virtually the entire community of Olivenhain is located outside the service area of an existing park. Again the need for passive open space is diminished somewhat when considering the large lots and the large County park located adjacent to the San Elijo Lagoon. However, these parks do not include the equipment and facilities for informal and organized recreation.

Park Facilities Needs Assessment

A third measure of facilities needs involves the use of standards that apply to specialized facilities, such as game courts and athletic fields. Standards used in this assessment also relied on those standards used by the NRPA.

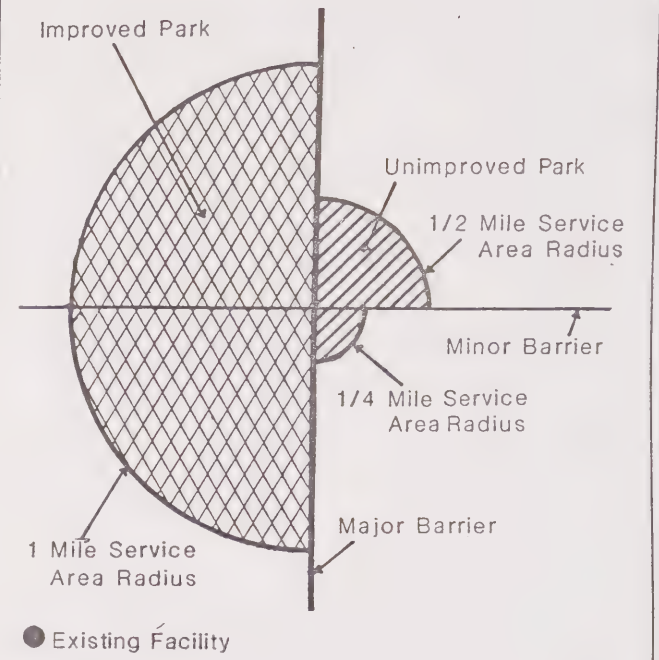
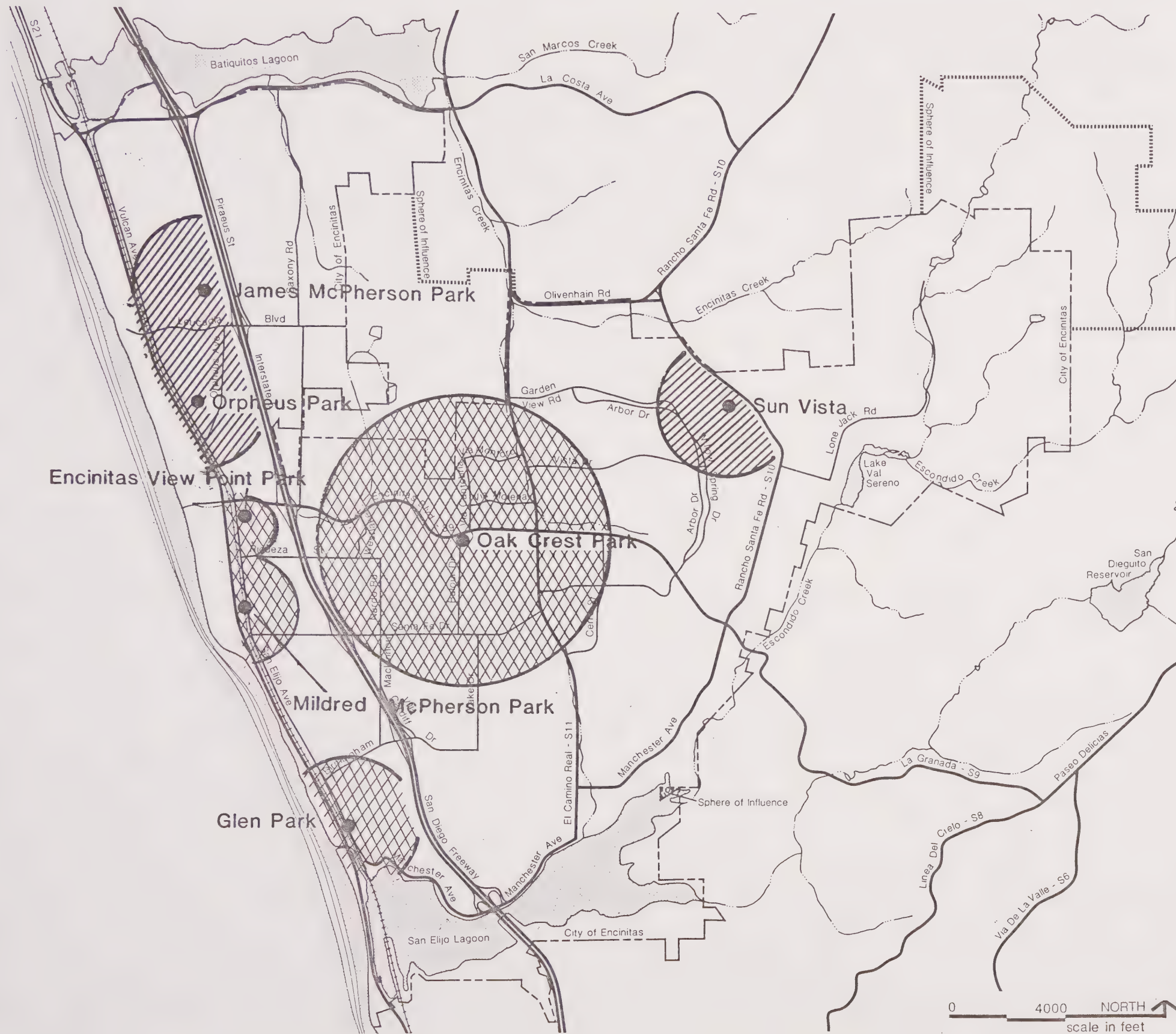


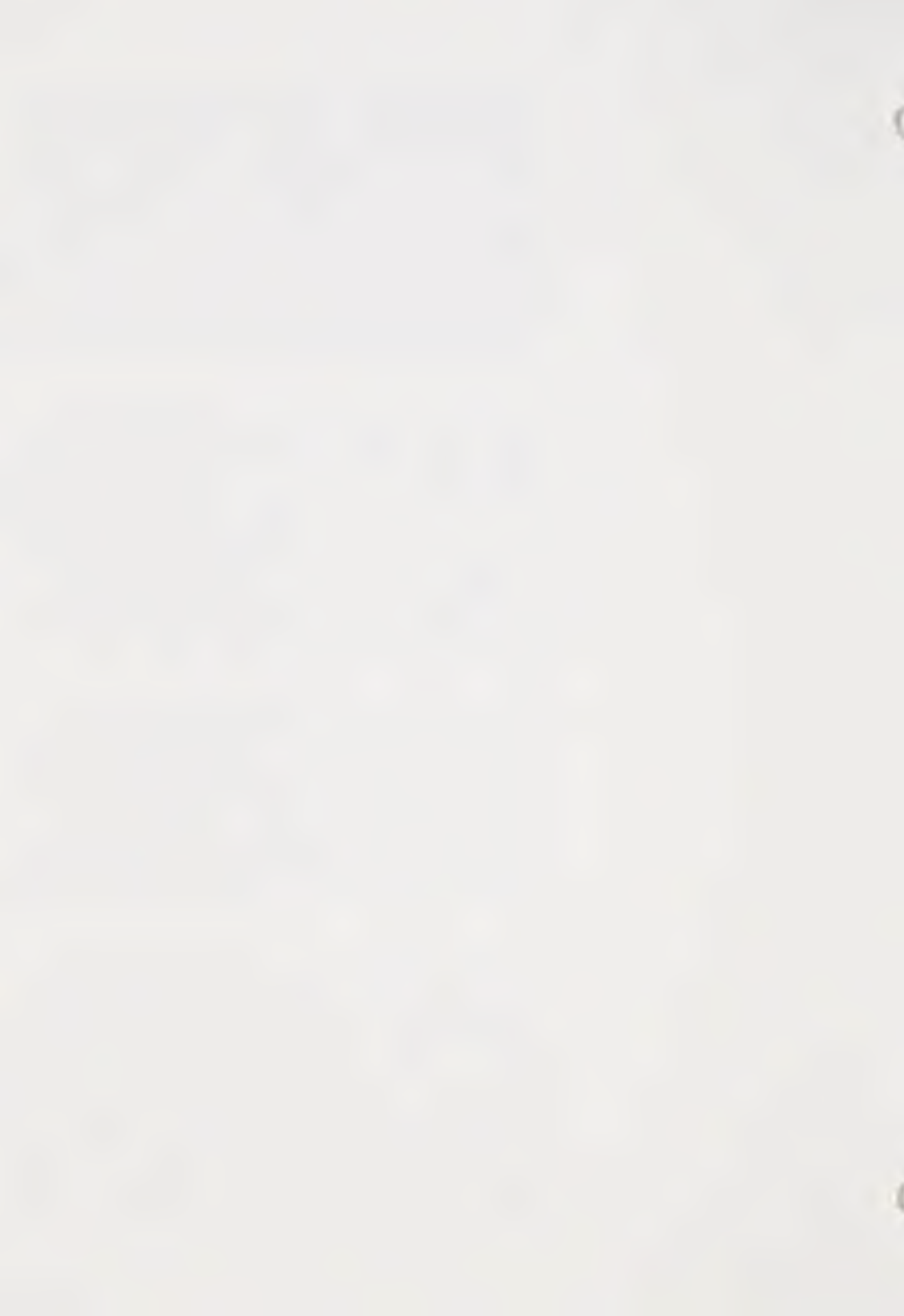
Figure 3
Service Area Needs
Assessment

Only two parks have specialized facilities (e.g., game courts, playground equipment, etc.) at the present time and no City or County parks have athletic fields that can be utilized for either organized or informal sports activities. A single tennis court and basketball court is located in Glenn Park in the community of Cardiff-by-the-Sea. Oak Crest Park, in the community of Old Encinitas contains some playground equipment for use by small children. The City is negotiating a joint use agreement with San Dieguito Union High School District concerning the use of the football field and baseball field at Oak Crest Junior High for public activities.

The NRPA also provides facility standards that define the number of specialized facilities (ball courts, athletic fields, etc.) and the accompanying fixtures that will meet the community's needs for various types of activities. Facilities standards are similar to the park space standards in that a certain number and varieties of facilities are recommended for a given population. The NRPA provides standards for a variety of facilities ranging from badminton courts to swimming pools. This analysis is concerned only with those facilities identified in Table 7.

Examination of Table 7 indicates that Encinitas is severely deficient in the number of athletic facilities that would be normally required given the City's present population. The shortfalls identified in this table will further increase with any future population gains. An extensive evaluation of athletic facilities presently available at the schools within the City needs to be conducted to determine which facilities could be used by the public at hours other than when classes are being held.

A preliminary assessment of existing athletic facilities at San Diegito High School, Diegueno Junior High School, and Capri Elementary School indicates that the three sites collectively have two football fields, three tracks, three baseball/softball fields, and one athletic field that could be used for informal field sports. A joint services agreement with San Diegito Union High School District and Encinitas Union School District would permit the City to meet or exceed NRPA standards for a number of these specialized facilities. A number of these schools are presently overcrowded which restricts the public use of these facilities.



**TABLE 7
NEEDS ASSESSMENT FOR SPECIALIZED FACILITIES**

Activity/ Facility	Service Area Radius	Standard Units/Population	Existing No. of Facilities	Projected Need For Facilities
Badmitten	1/4-1/2 mile	1/5,000 persons	0	10
Basketball	1/4-1/2 mile	1/5,000 persons	1	10
Handball	15-30 mins. travel time	1/20,000 persons	0	2
Tennis	1/4-1/2 mile	1 court/1,000 persons	1	51
Volleyball	1/4-1/2 mile	1 court/1,000 persons	0	51
Baseball	1/4-1/2 mile	1/5,000 persons	1*	10
		lighted field- 1/30,000 persons	0	1
Football	15-30 mins. travel time	1/20,000 persons	1*	2
Soccer	1-2 miles	1/10,000 persons	1**	5
Track	15-30 mins. travel time	1/20,000 persons	0	2
Softball	1/4-1/2 mile	1/5,000 persons	1**	10

Notes: * An agreement with San Diegito Union High School District will allow use of a football field and baseball field at Oak Crest Junior High School.

** A public use of a softball field and soccer field at Cardiff Elementary School is permitted during hours other than when school is in session. No formal agreement between the City and the Cardiff Elementary School District for the public use of these facilities has been enacted.

Source: National Recreation and parks Association. Recreation, Park and Open Space Standards and Guidelines 1983

Assessment of Trails The NRPA does not provide any specific standards regarding trails uses reserved for bicycles, joggers/hikers, or equestrian uses. Given the public's interest concerning the development of a The development of a Citywide trail system will be a focus of the Recreation Element given the public interest expressed regarding the development of such a system. Informal observations also indicate that a large number of persons presently jogging in areas not specifically designed for these activities might use such a system once it is in place.

The presence of large areas of wilderness along the major streams such as Encinitas Creek and Escondido Creek provide the City with an opportunity to establish a trail system which will integrate existing trails into a larger more comprehensive network. A large number of persons jogging and bicycling along Highway 101 and Vulcan Avenue were also observed. The possibility of establishing a trail extending southward from Batiquitos Lagoon to San Elijo Lagoon along Vulcan Avenue or some other north-south arterial roadway should be given serious consideration. Such a facility should include have a paved bikeway seperate from the jogging/hiking path and both should be segregated from motorized traffic.

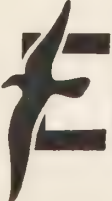
Finally, there has been a significant amount of public interest expressed concerning the creation of a formalized system of equestrian trails. One such group, the San Dieguito Riders, have prepared a proposed system that would integrate existing trails into a larger more comprehensive system. This proposal is well documented and carefully thought out and recognized both fiscal and legal constraints concerning the establishment of such a system. The proposal will serve as a basis for the development of the trails system identified in both the Recreation and Circulation Elements.

RESOURCE MANAGEMENT TECHNICAL REPORT

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 **Encinitas**
General Plan

RESOURCE MANAGEMENT ELEMENT TECHNICAL REPORT
CITY OF ENCINITAS GENERAL PLAN

December, 1987

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	
Purpose of this Report	RMTR-1
Issues and Opportunities	RMTR-1
NATURAL RESOURCES	
Soils	RMTR-2
Climate/Air Quality	RMTR-5
Water Resources	RMTR-7
Biotic Resources	RMTR-15
CULTURAL RESOURCES	
Paleontological Resources	RMTR-26
Archaeological Resources	RMTR-28
Historic Resources	RMTR-31

LIST OF TABLES

	<u>Page</u>
Table 1: Historic Structures of Planning Area	RMTR-33

LIST OF FIGURES

Figure 1: Soils	RMTR-4
Figure 2: Water Resources	RMTR-9
Figure 3: Biological Resources	RMTR-16
Figure 4: Archaeological Resources	RMTR-29

INTRODUCTION

Purpose of Report

The Resource Management Technical Report identifies the significant natural and cultural resources within the City's planning area. This report follows the general format of the element with the analysis of natural resources focusing on soils, air quality, groundwater resources, sensitive habitats, and open space. The analysis of cultural resources examines significant historic and prehistoric sites in the planning area.

Issues and Opportunities

The City of Encinitas is rich in natural and cultural resources. The City's location adjacent to the Ocean, the local topography, and the Mediterranean climate have contributed to this natural diversity.

Prime agricultural soils (Class I) are limited to the flood plain adjacent to Encinitas Creek as it empties into San Elijo Lagoon. Most of the soils in the City are classified as Class III soils. While soils within this classification are not considered prime agricultural soil, they are well suited for the crops commonly grown in the area.

Most of the airborne pollutants affecting the Planning Area are transported to the City from heavily urbanized areas located to the north and south. Air quality in the City is generally good when compared to air quality elsewhere in Southern California. The San Diego Air Basin remains a non-attainment area since air quality overall does not meet Federal standards.

Water quality within the planning area has been affected by recent urbanization and agricultural activity. Many of the streams have become polluted with nitrates, heavy metals, and other chemicals. These streams, in turn, drain into the lagoons which have also become polluted.

The diversity of the local environment has given rise to an equally diverse ecosystem. The wilderness areas and the wetland habitats within and adjacent to the Planning Area support a wide range of plant and animal species.

The abundance of food resources and the temperate climate attracted "early men" to the area soon after their arrival in the New World. Some of the oldest archaeological sites in the New World that have been discovered to date are located in San Diego County.

NATURAL RESOURCES

Soils

A comprehensive soil survey of the San Diego region was conducted by the U.S. Soil Conservation Service in 1973. This survey divided San Diego County into four major physiographic provinces. These physiographic provinces include the coastal plains, the foothills, the mountains, and the desert. The majority of the Encinitas planning area is located in the coastal province, though the extreme northeastern portion of the City is included in the foothills province.

The topography of the coastal plains province ranges from rolling hills to very steep terrain at elevations ranging from sea level to approximately 600 feet. The soils within this province receive most of their moisture during the rainy season (generally between November and April) and are generally dry during the summer months unless they are irrigated. Fog along the coast increases the local humidity, which does reduce the amount of moisture lost in the soils.

The foothills province is an interface between the coastal areas and the mountains further east. The topography of the foothills is dissected by both local streams and the larger streams which drain the mountainous areas. The climate of the foothills is similar to that of the coastal areas, though temperatures decrease and moisture increases with increases in elevation.

Soil Associations

The Soil Survey, San Diego Area, prepared by the USDA Soil Conservation Service, divided the San Diego region into 34 general soil associations which have been aggregated into eight primary soil groups. A soil association normally consists of one or more major soils which share certain properties or attributes. There are four soil associations found within the Encinitas planning area (refer to Figure 1.

Marina-Chesterton Association: The majority of the Encinitas planning area lies within this soils association, which consists of excessively drained to moderately well drained soils. Soils within this association consist of loamy coarse sands to fine, sandy loams on the coastal plains terraces. The soils are formed in alluvium found on the broad ridges that parallel the coast. These soils are generally used for growing citrus, truck crops, flowers, and avocados.

Salinas-Corralitos Association: The

Salinas-Corralitos Association includes the major stream channels in the planning area including Escondido and Encinitas Creeks, Lux Canyon, and Green Valley. Soils within this association range from moderately to excessively well drained soils, nearly level to moderately sloping clays, clay loams, and loamy sands. These soils are also formed from the eroding of marine sandstones and other sedimentary rocks as well as from the sediments of adjacent soils. These soils are generally suitable for the growing of flowers and truck crops.

Las Flores-Huerhuero Association: This soils association includes areas within the northern and eastern portions of the planning area. The soils consist of moderately well drained, moderately sloping to very steep loamy, fine sands and clays. These soils were formed from the erosion of sandstone and other marine sediments and are commonly used for range and irrigated truck crops.

Exchequer-San Miguel Association: The extreme northeastern portion of the planning area lies within this soils association which consists of well-drained, gently sloping to very steep, silt loams in the foothill areas. These soils are formed from igneous material with non-urban uses limited to range and watersheds.

Prime Agricultural Land

The Coastal Plains of San Diego County which include the planning area are well suited for agricultural production due to the climate. The major crops grown in the vicinity of the planning area are avocados, citrus, truck crops, tomatoes, and cut flowers. While the area supports a diverse range of agricultural uses, the soils that are considered prime agricultural soils according to the Capability Class definition (Class I and II soils) are limited to a few isolated areas in the southern part of the New Encinitas community. Most of these areas where prime agricultural soils are found have been developed or are located within the flood plain of Escondido Creek.

With proper management, climate, and moisture, a wide range of crops can be grown in areas where Class III and IV soils are present. A more accurate measure of soil suitability is provided by the USDA soils suitability rating, which indicates that local soils are well adapted to the five primary crops

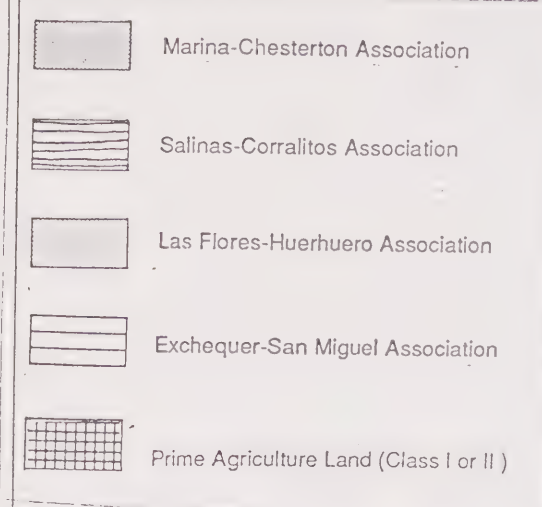


Figure 1
Generalized Soil Associations/
Agricultural Soils

SOURCE: Simplified from the U.S. Soil Conservation Service
General Soil Map, 1973

commonly grown in the region including tomatoes and cut flowers. Overall, about half of the soil types found within the Encinitas planning area are considered suitable for the five primary crops grown in the region. The soils considered unsuitable for agriculture are generally found in the areas of the City presently developed and in the uplands of the northeastern portion of the City.

If the definition of prime agricultural land is expanded to include the broader definition indicated in the California Government Code (Section 35046), which includes land having produced \$200 per acre of gross annual agricultural income for three of the past five years, a much larger proportion of the planning area will qualify as prime agricultural land. Most, if not all, of the areas presently under agriculture, including the green house areas, would fall within this definition.

The California Coastal Commission identified two parcels of land within the Encinitas planning area which it considered to be well suited as agricultural preserves. The parcels are located within or near Green Valley. They are the Ecke property, totaling some 875 acres within the valley floor and on the mesa located west of the valley, and a portion of the Placid Oil property which includes 230 acres also located in Green Valley.

The Coastal Commission felt that the mesa west of Green Valley was particularly well suited for long-term agricultural production due to its location in relation to urbanization in the area, the natural buffer afforded by the topography, and the fact that the land was under single-ownership. The Commission also felt that, over time, the uses in the valley floor would be better suited to low density urban development than for permanent agricultural production.

Climate Air Quality

The climate of the entire San Diego region is dominated by a semi-permanent high pressure cell situated over the Pacific Ocean. The cell influences wind direction for much of the year (westerly to northwesterly), resulting in clear skies for much of the year. The coastal areas of San Diego County have warm summers and mild winters with an average July maximum daily temperature of 75°F. and average January maximum daily temperature of 44°F. Rainfall is seasonal with most of the annual precipitation (about 10 inches a year)

occurring between November and April. Winds are generally light and variable and consist of offshore breezes with a windspeed averaging seven miles per hour.

Two types of temperature inversions are common to the area which affect the normal dispersion of pollutants in the lower air layers. The first type of inversion, referred to as a "subsidence inversion", occurs during the warmer months when descending air, associated with the Pacific Cell, comes into contact with the cooler marine air layers. The boundary between the two layers of air represents an inversion layer which effectively traps pollutants in the lower layers.

A second type of inversion, referred to as a "radiation inversion," commonly develops during cooler winter nights when air near the ground cools while the upper air layers remain warm. The shallow parcel of air formed between these two air masses is capable of trapping vehicle emissions such as carbon monoxide and oxides of nitrogen. As these pollutants become more concentrated, photochemical reactions occur producing oxidants commonly referred to as smog.

Description of Major Pollutants

Photochemical oxidants, which are composed mostly of hydrocarbons (HC) and reactive hydrocarbons (RHC), are considered a major problem in San Diego County. HC and RHC are produced from photochemical interaction with nitrogen oxides (NO_x). Motor vehicle emissions are a major source of these pollutants. It is important to note that pollutants may be produced in one area and transported to another area via the prevailing winds.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete burning of fuel in gasoline powered engines. Concentrations of CO occur close to heavily traveled streets, especially at locations where vehicles idle for prolonged periods.

Pollutants that are monitored extensively in San Diego County include nitrogen oxides (NO_x), sulfur dioxide (SO₂), and total suspended particulate matter (TSP). There are two types of nitrogen

oxides, Nitric Oxide (NO) and Nitrogen Dioxide (NO₂). The primary source of these gases is motor vehicle emissions. SO₂ is a colorless gas produced by fossil fuel combustion. NO_x and SO₂ levels in the San Diego region have been well below Federal quality standards for many years. TSP levels, however, did exceed 24 hour Federal standard in 1985. TSP are very fine liquid and solid matter transported in air currents. High TSP levels result in haze and limited visibility.

Air Quality Management

The Air Pollution Control District (APCD) is responsible for monitoring air quality in San Diego County to ensure that State and Federal ambient air quality standards are met. The APCD prepared a comprehensive plan outlining strategies in the 1982 State Implementation Plan (SIP) Revisions to meet specific goals for improved air quality in the region. According to the SIP Revisions, the San Diego Air Basin will not experience unhealthy air quality if the necessary emission reductions are enacted and if the growth in the region does not exceed the level anticipated by SANDAG Series V Growth Forecasts. SANDAG recently completed the Series VII growth forecasts which will be used to monitor the region's progress in attaining the 1982 SIP standards.

The Ambient Air Quality Standards (AAQS) defined by the State and Federal governments represent the maximum level of background pollution considered to be safe, and these standards are designed to incorporate an adequate margin of error to protect the public health and welfare. The five primary pollutants for which standards have been prepared include sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen oxides (NO_x), Ozone (O₃), and suspended particulate matter.

Water Resources

The City of Encinitas is located in the coastal region of San Diego County. This area receives a modest amount of rainfall, approximately 10 to 13 inches per year. Generally, precipitation occurs in the form of rain; snow is common only in the mountains to the east of the planning area. Normally, precipitation is a characteristic of the winter months. However, an occasional late summer tropical storm may bring some rain to the area.

There are eleven major drainage systems located within the San Diego Basin. Two of these systems are located in the Encinitas planning area. The first, the Carlsbad drainage system, includes an area of approximately 210 square miles drained by five creeks: Escondido, San Marcos, Encinitas, Buena Vista, and Agua Hedionda. Escondido Creek, the major stream in the system, has three tributaries: Reidy, North Ford, and Jacks Creeks. Escondido Creek ultimately drains into San Elijo Lagoon. San Marcos and Encinitas provide drainage for the central part of the Planning Area and empty into Batiquitos Lagoon. Buena Vista and Agua Hedionda Creeks, situated in the northern portion of the Carlsbad system, drain into Buena Vista and Agua Hedionda Lagoons, respectively.

Portions of two stream systems are located within the City of Encinitas planning area: the Escondido Creek/San Elijo Lagoon stream system and the Encinitas Creek/Batiquitos Lagoon stream system. Runoff within the Escondido Creek drainage system flows in a south to southwesterly direction from its headwaters upstream of Lake Wohlford toward San Elijo Lagoon and the Pacific Ocean. Escondido Creek drains 72 square miles of the 77 square mile watershed; the La Orilla Creek tributary to Escondido Creek drains the remaining 5 miles. The Escondido Creek drainage channel is located roughly along the southeastern boundary of the planning area; San Elijo Lagoon is wholly included within the planning area and forms a portion of the southern boundary.

The City of Encinitas has jurisdiction over the downstream portion of the Escondido Creek, Lake Val Sereno (an impoundment used primarily for irrigation water by residents adjacent to the lake), and the watershed's outlet to the Pacific Ocean (i.e., the San Elijo Lagoon). Local hydrology within the Planning Area is depicted in Figure 2.

The Escondido Creek floodplain is largely undeveloped and supports primarily agricultural, open space and grazing uses. Downstream from the City of Escondido, the creek flows through narrow San Elijo Canyon and into privately-owned Elfin Forest Lake. Downstream from this impoundment, the canyon is very narrow, twisting, and steep with chaparral covered slopes. In this portion of the canyon, the stream drops from elevation 360 feet to elevation 50 feet.



Figure 2
Watersheds in the Vicinity
of the Encinitas Planning Area

Encinitas
General Plan

The floodplain widens at the point just below Lake Val Sereno.

The Encinitas Creek channel flows into the planning area from the north, swings west and then turns northward again, flowing out of the planning area into Batiquitos Lagoon. Encinitas Creek drains an area of 7.4 square miles. The upper reaches of the stream channel along Rancho Santa Fe Road have been substantially disturbed by construction associated with urban development. Most of Encinitas Creek and its tributaries, however, are relatively low gradient alluvial streams with well-developed riparian vegetation.

Surface water quality within the Encinitas area, as in the San Diego Basin, generally declines with increased distance downstream as a result of the cumulative contributions of pollutants in runoff from agricultural lands and urban areas.

Changes in land use within local watersheds have led to increased sedimentation, potential increases in freshwater flows, and increased levels of urban contaminants (e.g., nutrients, heavy metals and other chemicals) within the creek and lagoon drainage systems.

The addition of impermeable surfaces within the watershed (related to urban development) reduces the amount of rainfall which penetrates into local groundwater basins and increases the amount of surface water flowing through existing creek channels, entering the lagoons and, assuming that the lagoon mouth is open, entering the ocean. Increased runoff rates can also result in increased erosion in unprotected areas.

Contaminants contained in urban runoff can become concentrated in the water and soils, ultimately, the soils of within the watershed which acts as a sediment trap. Storm flow "pulses" which result from the concentration of runoff within the watersheds may also help to keep the lagoon mouths open, thereby reducing salinity levels in the lagoons and removing a portion of the poor quality water from the lagoons.

Groundwater

Most of the water supply for the San Diego region is imported from outside sources. While the rate of groundwater replenishment from rainfall is slow

throughout the region, imported water, in the form of returns from irrigation and wastewater discharges, recharges many groundwater basins. In many cases, these discharges actually exceed the outflows from pumping within a basin, creating a net increase in the amount of groundwater. The quality of these discharges, however, is poor and, as a result, the water quality of the receiving basins tends to decrease over time.

The City of Encinitas planning area lies immediately north of the San Dieguito groundwater basin. Groundwater within this basin has minimal use at present with a few wells presently extracting water from the basin. The inflow in this basin far exceeds the outflow and, as a result, the basin is rapidly filling. When the basin fills to capacity, increased outflow will result in the appearance of rising water tables and subsurface outflow to the ocean. Other localized groundwater resources occur in conjunction with stream channels throughout the planning area. These resources are variable in terms of quantity and quality of water and are not widely used as groundwater supplies.

Groundwater in the San Diego region is generally of poor quality due to limited rainfall and long-term use of imported Colorado River water for irrigation. Historically, local groundwater supplies in the San Elijo Lagoon basin and the Escondido Creek watershed have been impacted by the soluble byproducts of animal wastes and fertilizers, infiltration of septic tank effluent, buildup of salts as a result of evaporation, and connate waters (waste present in rocks at their time of formation) from the La Jolla Formation.

Testing of wells within the basin between the years 1954 and 1964 and in 1975 yielded the following information regarding mineral constituents of local groundwater supplies: sulfate ranged from 0 to 81 milligrams per liter, chloride from 291 to 1265 milligrams per liter, fluoride from 0.20 to 2.10 milligrams per liter, nitrate from 130 to 437 milligrams per liter, and total dissolved solids from 875 to 4900 milligrams per liter. Recently, evidence of groundwater contamination from gasoline was detected in the southwest corner of the City.

The San Dieguito Basin is presently estimated to be mineralizing at a rate of approximately 33 mg/l (milligrams per liter) per year, with the primary source of salt input being a combination of agricultural, industrial, and municipal discharges. The percolation of wastewater into the basin is adding about 12 percent annually to the basin salt load. Although the mineralization rate would be expected to slow over time, a full basin would probably continue to have a slightly adverse salt balance and water quality in the basin would remain very poor. Potential solutions to improve water quality in the San Dieguito groundwater basin include controlling waste discharges and return flows into the basin through restricting use of septic tanks, and pumping down the basin and permitting it to fill only with high quality storm runoff.

Coastal Waters

Coastal waters are defined as the intertidal waters, or those waters subject to influence by tidal action, including estuaries and nearshore waters. In addition, the offshore waters of the Pacific Ocean within three miles of the shoreline are considered in this category.

Batiquitos and San Elijo Lagoons have been recognized as resources of National, State, and regional concern for their habitat value and for their special biological significance for migratory waterbirds along the Pacific Flyway, for resident bird populations, and for several endangered species. The County of San Diego San Dieguito Land Use Plan designated both as Resource Conservation Areas in the early 1980s (6).

San Elijo Lagoon has a watershed of approximately 88 square miles, with the primary tributary being Escondido Creek. The 500-acre lagoon is divided into three sections by the Santa Fe Railroad and Interstate 5. The natural ecological characteristics of San Elijo Lagoon, as well as the hydrological characteristics of the lagoon, have been greatly altered by fill embankments, dikes, and historic discharges of effluent into Escondido Creek and the lagoon.

Water quality in the San Elijo Lagoon varies depending on several factors, such as (1) the tidal influence within the lagoon which varies according to the status of the lagoon's outlet to the ocean and the tidal action, (2) the amount, intensity, and quality of inflows from upstream water sources, including the amount of sedimentation, (3) the composition of the lagoon's ecosystem, and (4) climatic factors such as temperature and humidity which affect the evaporation rate and temperature of the waters in the lagoon. The lagoon appears to be experiencing eutrophication. Eutrophic conditions are produced when the amount of organic matter exceeds the rates of absorption of the resulting nutrients. This condition may result in unsightly conditions and odors from decaying plant material. With limited or no tidal flushing, the water body has a low capacity to absorb nutrients without experiencing eutrophication. Sections of the water body are subject to accelerated sediment infilling. The existing nutrient build-up in bottom sediments is probably sufficient to sustain current levels of eutrophication.

Water quality concerns for the San Elijo Lagoon are typical to lagoon systems which are located downstream from urbanized and urbanizing areas. Urban runoff carries a significant amount of heavy metals that are higher than natural runoff. While most of the heavy metals are thought to be insoluble and no adverse conditions are known, the metals could potentially enter the aquatic food chain of the lagoon and the ocean. Soil erosion from disturbed sites which results during heavy rains may add significant amounts of sediment which enter the lagoon. However, the normal sediment load carried by streams into the lagoon appears to be minor. Nutrients carried by storm runoff can also contribute to the potential for eutrophic conditions.

Batiquitos Lagoon has a watershed of approximately 52 square miles with the primary tributary being San Marcos Creek. A dam on San Marcos Creek at San Marcos Lake serves as a silt basin for the watershed upstream of this point. The downstream channel is incised in a canyon until it spills out onto an alluvial plain which has been filled and developed as the La Costa Golf Course. Encinitas Creek, the other tributary to the lagoon, contains a floodplain which is primarily covered with riparian forest and marsh which traps most of the sediment carried by the creek.

Water quality in Batiquitos Lagoon is controlled by the frequency of opening of the lagoon's mouth, by the concentration of salts (related to evaporation rates), and by the inflow of nutrient-rich water from San Marcos and Encinitas Creeks. Water quality conditions fluctuate widely on an annual basis; extremely harsh conditions prevail in mid- to late summer when the lack of tidal inflows and limited seasonal freshwater inflows result in stagnant water.

The average annual sedimentation rate of the lagoon is estimated to be approximately 1 to 2 centimeters. The primary sources of this sedimentation come from erosion of graded development sites, agricultural areas, and unvegetated lands and channel erosion. Implementation of erosion control measures, installation of sediment basins, and preservation of the natural floodplain are effective in reducing sedimentation within the lagoon ecosystem.

Coastal Water Quality: Offshore water quality is monitored by the RWQCB. The primary existing development which could impact ocean water quality is the San Elijo Water Pollution Control Facility (San Elijo WPCF), located north of the San Elijo Lagoon in a valley between Interstate 5 and Highway 101. The San Elijo WPCF service area encompasses the Cardiff and Solana Beach Sanitation Districts. The facility treats wastewater from these districts. In 1982, the facility's average daily flow was 2.70 million gallons per day (mgd). The associated ocean outfall deposits from the treated effluent from these two districts, plus that received from the City of Escondido sewage treatment facilities is deposited into the Pacific Ocean. The outfall is located approximately 8,000 feet from the shoreline at a depth of approximately 145 feet below mean high tide line.

Two agencies, the California Coastal Commission and the U.S. Army Corps of Engineers, have primary permit authority over the lagoons. The Coastal Commission implements policies regarding protection and restoration of these significant wetland habitats. The U.S. Army Corps of Engineers, in cooperation with three other resource agencies which include the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the California Department of Fish and Game, serve as advisory to the Corps. The Army Corps of Engineers administers the Section 404 permit program which

applies to projects which would significantly affect freshwater and estuarine habitats. Finally, the State Lands Commission and the California Department of Fish and Game have additional authority to protect the public trust lands and the fish and wildlife.

Biotic Resources

The majority of the land within the Encinitas city limits has been developed for commercial and residential use or has been subject to agricultural activities. The northeastern periphery of the planning area, however, consists largely undisturbed native vegetation characterized by dense stands of chaparral on upper slopes and coastal sage scrub vegetation at lower elevations. Among the scrub vegetation are scattered expanses of disturbed grassland. Other major areas of remaining native vegetation occur on slopes south of Batiquitos Lagoon and north and south of San Elijo Lagoon. Riparian vegetation follows most of the stream channels (particularly Encinitas and Escondido Creeks) and occasional stands of oak woodland occur along the northern reaches of Encinitas Creek. Additional wetland habitat is associated with the two lagoons (San Elijo and Batiquitos) that occur within or influence the study area. Important habitats and biological resource areas within the Encinitas Planning Area include:

- ° Sensitive waterfowl and water-associated wildlife habitats;
- ° sensitive riparian wildlife habitats; including
- ° Black-tailed gnatcatcher and/or cactus wren habitat;
- ° Sensitive chaparral habitat which may support sensitive plant species; and
- ° Potential coastal bluff habitat and habitat for the sensitive tiger beetle.

Seven categories of vegetation were mapped within the planning area, including southern maritime chaparral, mixed chaparral, coastal sage scrub, nonnative grassland, wetlands (coastal salt marsh and riparian habitats), eucalyptus woodland, and disturbed areas (refer to Figure 3). Other mapping categories include agricultural and urbanized areas. Wetland habitat known to support riparian woodland vegetation was further distinguished.










-  Agriculture
-  Wetland Habitat
(coastal wetlands, riparian habitats)
-  Riparian Woodland
-  Coastal Sage Scrub
-  Southern Maritime Chaparral
-  Nonnative Grassland
-  Mixed Chaparral
-  Eucalyptus Woodland

Figure 3
Biological Resources
in the Encinitas Planning Area

Encinitas
General Plan

0 4000 NORTH
scale in feet

Habitat Evaluation

Developed Areas: Most of the area within the City is developed with commercial and residential uses. A relatively minor amount remains as open land used for agriculture or is vacant natural habitat or park land. Areas outside the City limits but within the sphere of influence are generally less developed. The northeastern corner of the planning area, in particular, supports large stands of undisturbed native vegetation. In general, areas mapped as developed are of low value to native wildlife populations and native plants. Exceptions include some riparian (stream) corridors such as Encinitas Creek and Escondido Creek, which partially transect developed land and protected open space such as Oak Crest County Park.

Chaparral: Chaparral is one of the most abundant native vegetation types in the undeveloped areas around the City and generally forms a dense closed-canopy cover. This habitat is widely distributed throughout California on dry slopes and ridges at low and medium elevations where it occupies thin, rocky, or heavy soils. It is typically a broadleaved, sclerophyllous (hard-leaved) vegetation. Species composition varies considerably within the chaparral ecosystem.. In terms of the California Environmental Quality Act (CEQA), chaparral is only considered a sensitive habitat where it supports populations of sensitive species. The chaparral communities present within the planning area include southern maritime chaparral and southern mixed chaparral.

Coastal Sage Scrub: This vegetation type grows on dry slopes, and dominant species are relatively shallow-rooted shrubs which seldom exceed 1.2 meters in height. Two forms of coastal sage scrub occur within the planning area: maritime succulent scrub and Diegan coastal sage scrub.

Maritime succulent scrub is a low, open habitat dominated by drought deciduous, subwoody, soft-leaved shrubs with a rich mixture of stem and leaf succulents. This association occurs on thin rocky or sandy soils and is often found on steep slopes of coastal headlands and bluffs. This habitat generally is found along the Coastal bluffs in the planning area.

Diegan coastal sage scrub is comprised of low, soft-woody subshrubs growing to a height of about 1 meter. Many of which are drought-deciduous. This association is typically found on low moisture availability sites, such as steep, xeric slopes or clay-rich soils that are slow to release stored water. Diegan coastal sage scrub occurs away from the coast, and particularly good examples of this vegetation type occur in the northeastern portion of the planning area.

Coastal sage scrub habitat in southern California is decreasing rapidly as a result of urbanization. San Diego County considers this a sensitive habitat, and evidence of its decline is the growing number of declining plant and animal species often associated with it.

Nonnative Grassland: Nonnative grassland is associated with shrubs or trees on land that has been disturbed or altered by machine, grazing, or fire. Nonnative grassland is a dense to sparse cover of annual grasses which is often associated with numerous species of showy-flowered, native annual forbs, especially in years of favorable rainfall. This association occurs on fine-textured, usually clay soils, which are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. No sizeable expanses of native grassland occur in the City.

Wetland Vegetation: The California Coastal Commission defines wetlands as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens". Within the City of Encinitas, wetlands, as defined above, are limited largely to San Elijo and Batiquitos Lagoons and the adjacent areas. Riparian systems, which are vegetative associations of hydrophytic species growing in or adjacent to freshwater watercourses, are also considered wetland habitat.

Two main wetland systems occur in or near the planning area: the San Elijo Lagoon/Escondido Creek system and the Batiquitos Lagoon/Encinitas Creek system. Each system can be divided into lagoon and

riparian vegetation. An additional community, coastal strand, is highly limited in distribution within the planning area, and occurs only as one small stabilized dune on the extreme southwest side of San Elijo Lagoon. This habitat has been degraded by past off-road vehicle (ORV) activity.

Wetland habitats in southern California support a number of endangered, sensitive, or declining species of local, regional, and national concern, and are normally considered significant in the planning process. These areas also enrich species diversity in their vicinity. Wetland habitats are further subject to state and federal regulations that include the Federal Clean Water Act (Section 404) and the California Department of Fish and Game Streamcourse Alteration Agreement.

San Elijo Lagoon lies within the planning area and Batiquitos Lagoon lies adjacent to and north of the planning area. Both lagoons support some riparian habitat on their perimeters, but are better characterized by tidal mudflats and coastal salt marsh communities.

Riparian habitat occurs along drainages and can be classified as riparian woodland, riparian scrub, freshwater marsh, and mesic (moderately moist) vegetation. Riparian habitat predominates along the two major streams which occur within the planning area: Encinitas and Escondido Creeks. In addition, riparian habitats are found along a number of smaller stream channels which also flow through the planning area. The presence of water provides a favorable habitat and promotes increased plant growth of a variety of native trees, shrubs, and herbs. Where water is present near the surface in stream channels year-round, a riparian woodland community can be maintained. In stream channels with intermittent surface or ground water availability, riparian scrub or freshwater marsh communities may develop. Mesic vegetation often occurs in wetland areas in which disturbance has recently ceased.

Riparian woodland (forested wetland) is a tall, open, broadleaved, winter-deciduous riparian association dominated by cottonwood (*Populus fremontii*) and several willow species (*Salix* spp). Western sycamore (*Platanus racemosa*) can also be

present, with shrubby willow species comprising the understory. The dominant species require moist, bare, mineral soil for germination and establishment. Riparian woodland is best-developed along Escondido Creek in the vicinity of Lake Val Sereno and in Green Valley along Encinitas Creek. In the northeastern portion of the planning area, riparian woodland grades into riparian-oak woodland, which is characterized by the presence of coast live oak (*Quercus agrifolia*).

Riparian scrub (scrub-shrub wetland) varies from a dense, broadleaved, winter-deciduous riparian association dominated by several willow species (*Salix* spp.) which grow to about 3 meters in height to a tall, depauperate, herbaceous association dominated by mulefat (*Baccharis glutinosa*). The former association is found on loose, sandy, or fine gravelly alluvium deposited near stream channels during flood flows, and most stands are too dense to allow much understory development. Mulefat-dominated scrub occurs along intermittent stream channels with fairly coarse substrate and moderate depth to the water table. Understory vegetation is composed of nonnative, weedy species or is barren altogether. Both associations may represent a successional stage leading to riparian woodland or may be relatively stable communities. Mulefat-dominated scrub often falls into the latter category. Riparian scrub is found throughout riparian habitat in the planning area.

Eucalyptus Woodlands: Eucalyptus woodlands are scattered throughout the planning area has small discrete groves. These woodlands are comprised of various species of eucalyptus (*Eucalyptus* spp.) and generally support little or no understory vegetation due to the toxic effect of the leaf litter. This habitat is of some value for raptor species as perching or nesting sites, and is often found in canyons in the urbanized portion of the City or in disturbed habitat.

Disturbed Habitat: Areas mapped as disturbed habitat are generally recently graded sites or have been subjected to past disturbances and exhibit little or no vegetative recovery.

Habitat Occurrence within the Encinitas Planning Area

A wide range of biological resources occur within the Encinitas planning area. For discussion purposes, the planning area is divided into four geographical regions. The City limits area includes most of the highly urbanized, coastal portion of the City, from directly north of San Elijo Lagoon to directly south of Batiquitos Lagoon. The southwestern sector encompasses San Elijo Lagoon and its upstream environs, including the southern portion of Olivenhain. The eastern portion of the planning area includes the rest of Olivenhain, as well as the adjacent areas outside the City boundary but within the sphere of influence. Finally, the northwestern area includes Green Valley and the hills to its west, as well as Batiquitos Lagoon. Each area is described below, with emphasis on resources of particular significance.

City Limits: The degree of urbanization within the City has nearly eliminated sizeable expanses of undisturbed native vegetation. Small, isolated pockets of chaparral and coastal sage scrub occur among residential and commercial developments. Many of these islands of vegetation are affected by human use and have been further degraded by the need for fire protection (i.e., fire- or fuelbreaks, or plantings of nonnative fire-resistant plants). The lack of well-developed woodland habitat in the City further limits the use of this urban area by wildlife. Several sensitive biological resources do occur within the developed area of the City.

Southwestern: The biological resource of greatest value in this area and perhaps the entire planning area is San Elijo Lagoon. This lagoon supports approximately 200 acres of coastal salt marsh vegetation which is concentrated at its eastern end. Due to the frequent closure of the lagoon mouth, and the resulting freshwater nature of the lagoon, however, vegetation quickly grades into brackish marsh east of the dam near Interstate 5, although some areas of salt marsh still occur, particularly on or near mudflats. The upper lagoon is managed as a wildlife refuge.

Wildlife habitats within the lagoon are particularly important to migratory waterfowl following the Pacific Flyway, marsh and shorebirds,

and as nurseries for ocean fish. Several sensitive animal species are known to inhabit this lagoon, including the federally and state-endangered light-footed clapper rail and California least tern, and the state-endangered Belding's savannah sparrow.

Escondido Creek enters the lagoon at its eastern end. Brackish marsh eventually grades into freshwater marsh, continually moist areas, and riparian woodland further upstream, near Encinitas Boulevard. Upland areas surrounding the lagoon are dominated by coastal sage scrub and chaparral.

Eastern: The eastern region of the City is an area of low development characterized by large tracts of relatively undisturbed chaparral and coastal sage scrub vegetation. For the most part, a semi-rural environment exists adjacent to this undisturbed habitat. Other than the lagoon systems, most wildlife found within the planning area occurs in these areas of low development.

Escondido Creek runs along the southeastern portion of this region while Encinitas Creek transects the northeastern corner. Both creeks support some wetland vegetation, with the best-developed stands occurring along Escondido Creek in the vicinity of Lake Val Sereno.

Northwestern: Native vegetation in this region occurs largely in Green Valley and the hills south of Batiquitos Lagoon. Although Green Valley is primarily used for agricultural purposes, Encinitas Creek flows along its eastern border. Riparian vegetation occurring along the creek is considered a potential habitat for the federally and state-listed least Bell's vireo, although the presence of this species here has not been confirmed. The slopes and ridges west of Green Valley are largely undeveloped and support southern maritime chaparral which is considered a sensitive habitat by the California Department of Fish and Game. Coastal sage scrub, another sensitive habitat, occurs on hills just south of Batiquitos Lagoon.

Batiquitos Lagoon lies just north of the northern City boundary, but could be affected by adjacent development in the City to the south. This brackish water lagoon supports primarily coastal salt marsh vegetation and provides valuable habitat for many bird species. The proposed Batiquitos Lagoon

Enhancement Plan is intended to retain the sensitive species known from this area, including brown pelican (*Pelecanus occidentalis californicus*), California least tern, Belding's savannah sparrow, snowy plover, least bittern, short-eared owl, northern harrier, and California brackishwater snail.

Important Biological Areas

The most important biological areas within the City are the two major wetland systems: San Elijo Lagoon/Escondido Creek and Batiquitos Lagoon/Encinitas Creek. These systems function as the primary wildlife corridors in the Encinitas region. Although Batiquitos Lagoon is actually outside the planning area, it is just as important biologically as San Elijo Lagoon. Coastal salt marsh habitat, which occurs in both lagoons, is considered a rare and sensitive resource at the federal, state, and local levels. This rapidly declining habitat supports a unique set of plants and animals including a number of high interest species. Approximately 281 bird species have been observed at or near San Elijo Lagoon. This includes 8 species which are federally or state-endangered (6 of which breed or have bred here), and 28 additional species which are considered "species of special concern".

Sensitive riparian habitats occur along Encinitas and Escondido Creeks, and are best-developed in Green Valley and in the vicinity of Lake Val Sereno, respectively. Both areas are considered potential habitat for the federally and state-endangered songbird, least Bell's vireo, despite the absence of this species in recent surveys. Although all wetland areas are considered environmentally sensitive, potential vireo habitat may warrant specific management plans or at least recommendations regarding their use. Recommendations for these drainages are expected to be included in the Comprehensive Species Management Plan (CSMP) currently being prepared for the species by a local environmental consulting firm in conjunction with the San Diego Association of Governments.

In general, riparian areas are naturally limited and remaining acreages function as important island habitat for migrant birds. Many bird species are restricted to riparian habitat and are dependent on

this habitat for breeding. Overall wildlife diversity is normally higher in riparian zones than in surrounding habitats. Such habitat, in occupying natural drainages, also functions to control water quality and erosion, and provides a wildlife corridor effect.

Other areas are important biologically because they support flora, fauna, or habitat types that are limited in distribution, and/or require or tolerate unique edaphic factors that occur there. Examples include San Diego thornmint which occurs only on clay soils, California black-tailed gnatcatcher, which is found primarily in coastal sage scrub habitat, and southern maritime chaparral which is restricted to the Encinitas area. Only scattered patches of native habitat remain within the urbanized portion of the City, and several of the outlying areas are rapidly being developed. Remaining native upland habitat of relatively high biological value occurs on the ridge and slopes west of Green Valley, on slopes north of Manchester Boulevard, on slopes south of San Elijo Lagoon, and in the northeasternmost portion of the planning area. Oak Crest County Park is also noteworthy because of the large number of sensitive plant species occurring in open space areas within the park's boundaries.

The County of San Diego has designated a number of Resource Conservation Areas (RCA's) within the planning area. Batiquitos and San Elijo Lagoons are protected resources largely because of the sensitive habitats (wetlands) and bird species (California brown pelican, California least tern, light-footed clapper rail, Belding's savannah sparrow, an snowy plover) found therein, and because of the sensitive plant species (Encinitas baccharis, wart-stemmed ceanothus, San Dieguito sand-aster, San Diego thorn-mint, coast barrel cactus, and Del Mar manzanita) which occur in adjacent upland habitat.

Escondido Creek has been designated an RCA largely because of riparian woodland habitat in the creek, although southern maritime chaparral on slopes, a known deer population, and several sensitive plant species also contribute to the value of this area.

RCA's within the urbanized areas of the City include Oak Crest County Park, Olivenhain Hills, and the Encinitas-Leucadia beach areas. Oak Crest County Park supports southern maritime chaparral and several sensitive plant species. The Olivenhain Hills RCA is now largely developed, but stands of southern maritime chaparral still occur southeast of the junction of Olivenhain Road and El Camino Real. Resources to be conserved in the beach areas include the sandy beaches and lower beach bluffs.

CULTURAL RESOURCES

Paleontological Resources

Paleontological resources may be defined as the fossil remains of life from past geological ages. Such resources are commonly called fossils, and can be divided into two types: vertebrate and invertebrate. Vertebrate fossils are the remains of ancient fish, amphibians, reptiles, birds, and mammals and are uncovered infrequently and are often considered significant finds. Invertebrate fossils are the remains of ancient non-vertebrate life forms, usually in the form of calcareous shelly material, and include the common occurrences of clams, snails, and oysters.

The underlying geologic formation is important in the assessment of the paleontological resources, or fossils, of an area. Geologic formations in a given area typically possess a known potential for fossils based on past fossil productivity and the processes which created the formations. Fossils are an irreplaceable resource which can help establish precise time correlations between widespread rock formations, and increase knowledge of ancient climates and environments.

The geologic strata of the Encinitas area ranges in age from the Jurassic to the Quaternary. Some of these rock types are known to contain fossils, particularly the sedimentary deposits. In addition, there are formations in which no documented occurrence of fossils exists. These formations, however, are largely unsurveyed and may have the potential for significant paleontological resources. The following discussion involves the various rock formation types in Encinitas and the paleontological resources these formations have yielded or may contain.

Quaternary alluvium and terrace deposits are largely recent in age, having been deposited in the last 11,000 years. They consist of undifferentiated and largely unconsolidated silt, sand, gravel, and clay. Alluvial and terrace deposits are primarily deposited through the action of running water. For this reason, they will be referred to collectively as alluvium. Although paleontological resources have occurred in alluvium at a number of locations, the destructive nature of alluvial deposition limits the amount of preserved fossils in alluvium. Generally, fossils which survive the deposition process are highly resistant materials. For

example, the teeth and jaws of a vertebrate may be preserved. Although it is possible Cenozoic land mammals, such as rodents and horses, may be found in Quaternary alluvial deposits, it is unlikely. Generally, these deposits are not considered significant for paleontological resources, due to the overall lack of fossil remains found there.

Eocene marine Sedimentary rocks are 38 to 53 million years old. These formations include rocks of the La Jolla Group and the Santiago Formation. Paleontological resources are known to exist in this type of rock and have been identified in areas outside the region. During the Eocene period, both vertebrate animals and marine nonvertebrates existed in coastal San Diego County. Therefore, this rock type has the potential for yielding a wide variety of fossils from many different prehistoric environments.

The beach cliff exposures of Eocene nearshore marine deposits along coastal Encinitas have produced diverse, well preserved vertebrate and invertebrate fossils. These areas include near Sea Cliff County Park in the exposed Delmar formation and south of Leucadia Boulevard in the exposed Torrey Sandstone.

Undifferentiated granitic rock formations occur just outside of the City and may underlie other rock types in Encinitas. Generally, these formations are considered unlikely to contain significant fossil resources. Upper Cretaceous conglomerate and sedimentary rocks appear to underlie the Eocene rocks in a portion of Olivehain. Marine fossils and delicately preserved flora are found in these rocks. A dinosaur fossil was also recovered in Cretaceous sedimentary deposits in the region.

The Jurassic Santiago Peak Volcanic formation consists of mildly metamorphosed, interbedded flows, tuffs, breccias, agglomerate and sedimentary rocks. Although fossils have been identified within this rock at a number of locations in the county, they tend to be rare and generally poorly preserved.

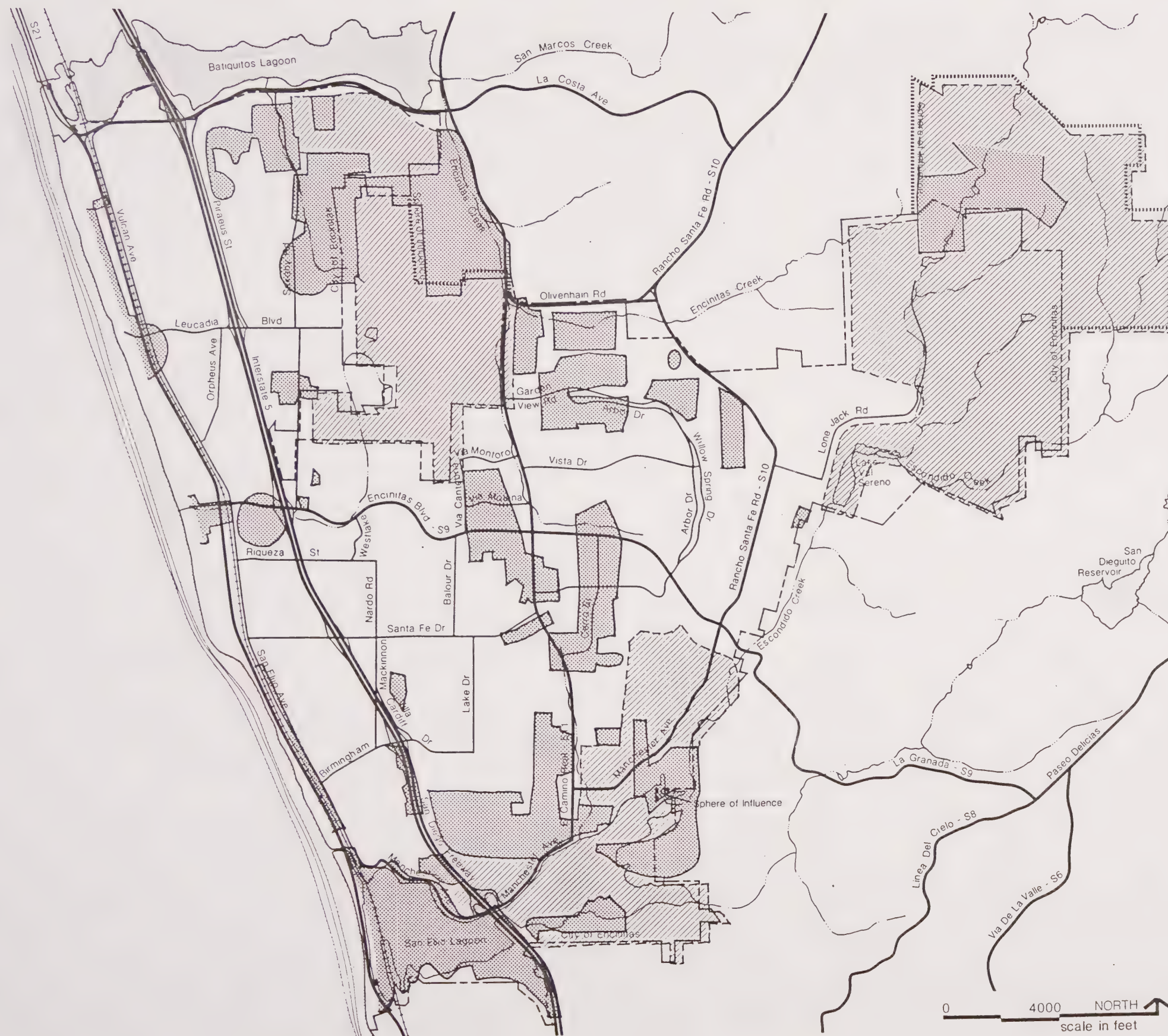
The fossiliferous members of the Santiago Peak volcanics are considered scientifically significant, because of their ability to provide diagnostic age correlations. While fossils have not been recovered in Encinitas, additional onsite investigation has the potential to yield significant paleontological resources.

Archaeological Resources

San Diego County was occupied by Native American people as long ago as 9,000 years. Historians identify two historical periods during this span of time, which are characterized by specific cultural traits. The Early Period (approximately 9,000 to 3,000 years before the present) includes people referred to as the San Dieguito and La Jolla. The San Dieguito migrated from the inland lakes of the present-day desert to the coastal and inland areas of San Diego County. They made sophisticated tools, milled plant seeds, and gathered shellfish and fish. Gradual changes, tied to an emphasis on sea-based subsistence, are associated with the La Jolla people. Tools from the coastal La Jolla settlements tend to be less sophisticated than those of the inland La Jolla and earlier San Dieguito people. The Late Period (beginning approximately 2,000 years before the present) was marked by the diffusion of cultural traits from the eastern Yuman and Shoshonean peoples. The use of obsidian in tool-making, certain objects, and the practice of cremation are associated within the Yuman culture.

There have been 209 archaeological resource sites identified in or near the City of Encinitas. Over 100 of these sites were identified in the last two decades. Figure 3 identifies those portions of the City where surveys have been conducted. In addition, the map identifies those undeveloped portions of the Planning Area where surveys have not been conducted. The various sites may be classified in one of the following general categories:

- ° Permanent Habitation (Village) - This site type represents long term and/or seasonal activity. It is typified by flaked lithic (rock) debris (primary, secondary), floral and faunal remains, range of formal artifacts (ground stone, lithics, pottery) and the presence of a developed midden (concentration of shell, bone, carbon, ash, lithic, and other cultural debris combined with and usually visually recognizable by the presence of dark soil. Historic middens are sometimes called privys or kitchen middens).
- ° Temporary Habitation (Camp) - This site type represents seasonal activity, and is typified by the characteristics of a village site but lacks a developed midden.



- Survey Areas
- Undeveloped Areas That Are Un-surveyed

Figure 4
Archaeological Resources

- ° Milling Station - This site type is characterized by processing of plant seeds and small animals by grinding or pounding, as evidenced by mortars, manos, and metates or milling slicks. These sites may also have a low occurrence of other artifacts but lack midden.
- ° Lithic Scatter - This site type is characterized by the predominance of cores and flaked lithic debris. Activities represented are core preparation, tool manufacture or tool reworking.
- ° Shell Scatter - This site type is characterized by the presence of shellfish remains. Lithic (stone) artifacts and/or pottery may be associated with the shell scatters; however, these artifacts are few in number or limited in variety.
- ° Shell Midden - This site is typically a concentrated deposit of shellfish remains with few associated artifacts.
- ° Rock Feature - The site type consists of a manmade arrangement of rocks reflecting habitation (hearth), food storage (grainery), or other uses.
- ° Isolated Find - A single occurrence of an artifact such as a flake, tool, core, mano, metate, or ceramic sherd is considered an isolated find.

The age of archaeological sites have been estimated by the type of artifact or ecofact, not by radiocarbon dating techniques. It appears from this cultural affiliation method of dating that the majority of sites in the Encinitas planning area are from the La Jolla period, which covers between 7500 to approximately 2000 years before the present. More precise dating of artifacts from this area remains an important scientific venture.

At this time, none of the recorded archaeological sites within the Encinitas area have been officially recognized for California State landmark or National Register status. The potential, however, exists for several of these sites to be nominated for inclusion in the National Register or provided Landmark property status. Also, the potential for additional archaeological finds is high in some places within the Encinitas planning area.

Historic Resources

Several historically significant structures, sites and features have been identified within the City of Encinitas. Generally, structures and features are considered significant if they represent or depict a particular style, historic period, movement or event, or if they illustrate the work of a famous or well-recognized architect. Table 1 lists the historic structures, sites, and features that still exist within the City today.

The community of Olivenhain was settled by individuals who migrated from the midwest and eastern portions of the United States. The original settlers arrived around 1884 and undertook agricultural enterprises. In 1894, Olivehain residents celebrated their tenth anniversary by opening the Olivenhain Community Hall. The Hall is still standing today and was designated as a State of California historic site in 1971.

The community of Encinitas (Old and New) was settled by farmers in the 1880s. The Derby House, a structure which is still standing in Encinitas, was built by one of the original farmers who turned to the construction business after his farm failed. This building was completed in 1892 and was a popular meeting place for area residents. Today, the Derby House operates as a hotel/apartment building. Another historic structure in this community is the Encinitas Schoolhouse located at Fourth and F Streets. The structure was built in 1883 and has been the object of restoration attmpts by the Encinitas Historical Society.

The community of Cardiff-by-the-Sea was settled in the late 1880s. Significant community growth, however, did not occur until after World War II. Many of the early structures, such as a 300-foot wooden pier, have been destroyed over the years.

The community of Leucadia was first settled in the 1880s. In the 1920s, the economic livelihood revolved around the cultivation of flowers. As a result of population growth and intensified development the flower agribusiness has diminished.

TABLE 1
HISTORIC STRUCTURES/FEATURES BY COMMUNITY

Olivenhain

Wood Property	3744 Manchester Avenue
Miller Property	211 Rancho Sante Fe Road
Olivenhain Store	211 Rancho Santa Fe Road
Olivenhain Cemetery	Colony Terrace
Olivenhain Hotel	End of dirt road off F Street
Windmill	Camino Del Norte at Escondido Creek
Olivenhain Community Hall and Olivenhain School	Rancho Santa Fe and Seventh Street
Lickert Shanty	Rancho Santa Fe and Seventh Street
Olivenhain School Site	2365 Seventh Street
Bumann Farm	3666 Bumann Road

Encinitas

Cozens Thornton House	112 C Street
Derby House	649 South Vulcan
Self Realization Fellowship	215 K Street between Cornish and Highway 101 (alt. SRF entrance)
H&H Service Station	1205 First Street
Encinitas Schoolhouse	4th and F Streets
Quail Gardens	230 Quail Gardens Drive
La Paloma Theater Complex	471 First Street
Daley Double Saloon	546 First Street
Bessie Love House	541 Fourth Street
Taylor Place	720 Third Street
Sidewalk notation: "Miracle 8-1929"	906 Third Street
Boathouse	726 and 732 Third Street
Bessie Love guest houses	535 and 545 Fourth Street
House	515 Fourth Street
House	1239 San Dieguito
House	959 Cornish
House	530 A Street
Logan's Decorating Center	602 North Highway 101
Central School	185 Union
Torrey Pines and Cypress Tree Alee	515 Fourth Street
Bliss House	221 Sunset Drive
Santa Fe Railway Station	Encinitas Boulevard and Highway 101
"Gingerbread" stone house	840 Second Street

TABLE 1
HISTORIC STRUCTURES/FEATURES BY COMMUNITY
(continued)

<u>Cardiff-by-the-Sea</u>	
Cardiff Mercantile	107 South Acacia Avenue
<u>Leucadia</u>	
Windmill	Saxony Road, southeast corner at La Costa Road
Zane Grey House	1200 Neptune
Chaplin House	1448 Neptune
Grch House	636 Leucadia Boulevard
Rancho Calhoma House	407 Sore View Land 1371 Hygeia
Baumgardner House	305 East Hillcrest Drive
Leucadia Roadside Park	
Temple Grove	Leucadia Boulevard and Highway 101
Eucalyptus and Cypress Allee	Highway 101, north from Leucadia Boulevard
Coutts House	371 East Hillcrest Street
Encinitas Train Station	501 Highway 101
House	1058 Hymettus

Source: Recon 1980



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